BLUE ROCK
ENVIRONMENTAL, INC.

December 29, 2005

Mr. Robert Stone
Hazardous Materials Specialist
Humboldt County Health Department
Division of Environmental Health
100 H Street, Suite 100
Eureka, California 95501

Re: **Site Closure Evaluation**
Indianola Market
7769 Myrtle Avenue
Eureka, CA
Project No. NC-18
LOP # 12690

Dear Mr. Stone,

This report presents a site closure evaluation for the property at 7769 Myrtle, Eureka, Humboldt County, California (site) (Figure 1), and was prepared for Mrs. Beverly Alto by Blue Rock Environmental, Inc. (Blue Rock). This report was prepared in response to the Humboldt County Division of Environmental Health (HCDEH) letter dated November 14, 2005.

Background

Site Description
The subject site is located near the northern boundary of the City of Eureka in Humboldt County approximately 800 feet north of the intersection of Indianola Cutoff and Myrtle Avenue in a combined commercial/ residential area of Eureka at approximately 25 feet above mean sea level (Figure 1). The site is located in the southern portion of a 5-acre parcel of land containing two residences, the Indianola Market, and The Alto Brothers Trucking equipment maintenance/ storage yard and office.

Site History
The Indianola Market contained two 550-gallon capacity gasoline underground storage tanks (USTs) and one 550-gallon capacity diesel UST (Figure 2). The UST system, consisting of one 550-gallon gasoline and one 550-gallon diesel UST was constructed in 1953. At some time during the 1960s, the diesel UST was abandoned in-place and an additional 550-gallon gasoline UST was installed. The UST system was operated until September 1998, when the three USTs were closed by removal. The UST system was replaced by a single 1,000-gallon capacity aboveground gasoline storage tank, which is currently located on a concrete pad directly above the former UST excavation.

In September 1998, Christens NCI, Inc. (NCI), of Eureka, California, decommissioned and removed three USTs from the site along with associated piping, dispensers, and the dispenser island. This work was observed by the HCDEH and at the direction of the HCDEH inspector, approximately 75 cubic yards of obviously impacted soil was excavated and stockpiled at the site pending disposal. During UST removal activities, petroleum hydrocarbon stained soils were

observed and groundwater entering the excavation exhibited a sheen accompanied by hydrocarbon odors. This confirmed that an unauthorized release of petroleum had occurred. On September 29, 1998, Mr. Jerry Avila, operator of the UST system, filed an unauthorized release report at that time. After completion of UST removal and soil excavation operations, NCI personnel collected confirmation soil and groundwater samples from the excavation at locations specified by the HCDEH. Results of soil and groundwater sampling confirmed that an unauthorized release of petroleum had occurred.

Site Investigation and Corrective Action History

On October 1, 2001, Clearwater Group (Clearwater) supervised Fisch Environmental of Valley Springs, California drill five direct push borings to preliminarily investigate the onsite extent of soil and groundwater contamination resulting from the confirmed release from the former UST system. Results for this investigation and the locations of the proposed monitoring wells were presented in Clearwater's *Preliminary Subsurface Investigation Report* dated October 22, 2001. In a letter dated October 26, 2001, the HCDEH concurred with Clearwater recommendations for monitoring well locations.

On November 7, 2001, Clearwater supervised Mitchell Drilling Environmental (MDE) in installing three monitoring wells: MW-1, MW-2 and MW-3 (Figure 2). These monitoring wells were placed in locations to assess the sorbed and dissolved-phase hydrocarbon contamination associated with the UST release. Results of this investigation are presented in Clearwater's *Monitoring Well Installation and Fourth Quarter 2001 Groundwater Monitoring Report* dated December 13, 2001.

On October 10, 2002, Clearwater supervised MDE in drilling two monitoring wells: MW-4 and MW-5 (Figure 2). These monitoring wells were placed in locations to further assess the residual sorbed and dissolved-phase gasoline and diesel range hydrocarbon contamination associated with the UST release. Data collected during this phase of investigation are presented in Clearwater's *Monitoring Well Installation and Fourth Quarter 2002 Groundwater Monitoring Report / Sensitive Receptor Survey* dated November 18, 2002.

On June 10, 2003, Clearwater supervised MDE in drilling four soil borings: B-6 to B-9 (Figure 2). These borings were placed in locations to further assess the residual sorbed and dissolved-phase gasoline and diesel range hydrocarbon contamination associated with the UST release. Data collected during this phase of investigation are presented in Clearwater's *Additional Investigation Report* dated July 8, 2003.

Per HCDEH request in a letter dated July 11, 2003, Clearwater prepared and submitted a *Corrective Action Plan* (CAP) dated February 18, 2004. The HCDEH responded to the CAP submitted by Clearwater in a letter dated April 23, 2004 requesting corrections to the existing CAP and a response to questions contained in that letter. In May 2004, Blue Rock was retained by Mr. and Mrs. Alto to continue site work. Blue Rock subsequently submitted a brief letter report dated June 15, 2004 in response to HCDEH requests. Groundwater monitoring continued.

Summary of Hydrogeology and Contamination

Hydrogeology

The subject site is situated on uplands above Humboldt Bay approximately 25 feet above mean sea level and is located approximately one mile east of the Pacific Ocean. Surface water drains to the east and south towards Fay Slough and Humboldt Bay. The site is underlain by Pleistocene age fluvial sediments of the Hookton Formation.

Cumulative investigation has indicated that the subsurface is composed of interbedded layers of elastic silts, sandy silts and sands (MH, ML, SW) to depths ranging from 2 to 20 feet bgs. The site is primarily underlain by sediments characterized as elastic silts (MH). The elastic silt is underlain by sandy silt (ML) and sands (SW) from about 10 to 20 feet bgs. Site cross sections are presented in Figures 2a and 2b. Boring logs are presented in Appendix A.

Groundwater is present in unconfined conditions beneath the site at depths of approximately 1.5 to 7 feet bgs with seasonal depth to water fluctuations of approximately 5.5 feet. The direction of groundwater flow historically has been calculated to be toward the southwest at gradients ranging from 0.017 ft/ft to 0.05 ft/ft.

Based on field observations and literature values, the average hydraulic conductivity of the average hydraulic conductivity of the elastic clayey silt unit (MH) is likely on the order of 10^{-6} cm/s, the average hydraulic conductivity of the sandy silt unit (ML) is likely on the order of 10^{-4} cm/s, and the average hydraulic conductivity of the sand unit (SW) is likely on the order of 10^{-2} centimeters per second (cm/s) (Feeze and Cherry 1979).

Contaminants of Concern

Historical soil and groundwater sample analytical data indicate that gasoline and diesel range hydrocarbons (TPHg, TPHd, BTEX and MTBE) are the contaminants of concern beneath the site (Tables 1, 2 & 3).

Potential for Contaminant Migration

Based on quarterly groundwater gradient and monitoring data collected historically, Blue Rock evaluated the extent of contamination in groundwater below the site and whether petroleum hydrocarbon are migrating or are likely to migrate.

Groundwater gradient was calculated based on static water level data collected during the last five quarterly groundwater monitoring events conducted. Groundwater flow direction has consistently been towards the southwest with gradients ranging from approximately 0.05 ft/ft to 0.017 ft/ft.

The approximate hydraulic conductivity for the elastic clayey silt unit (MH) is 0.002832 feet per day (10^{-6} cm/s), the approximate hydraulic conductivity for the silty sand unit (SM) is 0.2835 feet per day (10^{-4} cm/s), and the approximate hydraulic conductivity for the sand unit (SW) is 28.35 feet per day (10^{-2} cm/s). A porosity of 35% is assumed for all soils (Freeze and Cherry, 1979).

The groundwater seepage velocity calculations for the three general material types documented at the site according to Darcy's Law follow:

Elastic clayey silt (MH)

$V_s=Ki/n$ $\quad V_s = \frac{(0.002835 \text{ ft/day})\ (0.05 \text{ ft/ft})}{0.35} = 0.000405$ ft/day

Sandy silt (SM)

$V_s=Ki/n$ $\quad V_s = \frac{(0.2835 \text{ ft/day})\ (0.05 \text{ ft/ft})}{0.35} = 0.0405$ ft/day

Sand (SW)

$V_s=Ki/n$ $\quad V_s = \frac{(28.35 \text{ft/day})\ (0.05 \text{ ft/ft})}{0.35} = 4.05$ ft/day

Where,

K (SW) = 28.35 ft/d
K (MH) = 0.002835 ft/d
K (SM) = 0.2835 ft/d
i = 0.05 ft/ft (the max. observed at the site)
n = 35%

Based on the calculations above, the maximum estimated seepage velocity for groundwater in the SW layer is 4.05 feet/day. The minimum seepage velocity within the MH strata is 0.000405 feet/day.

Despite the low solubility of hydrocarbons in water, the dominant mode of lateral contaminant migration is as a dissolved component in groundwater. The movement of groundwater is a function of naturally occurring groundwater gradient, soil permeability and anthropogenic affects of pumping and surface irrigation. Yet, the migration of dissolved-phase hydrocarbons is inhibited by natural attenuation processes of dilution, dispersion, volatilization, adsorption, and chemical and biological degradation. Based on the declining concentrations of target analytes in groundwater samples collected from MW-5 (the distal downgradient monitoring point), it is likely that a combination of these natural attenuation processes are occurring within the plume which appear to be limiting significant downgradient migration of dissolved-phase petroleum hydrocarbons in groundwater.

Sorbed-Phase Contamination

Historical investigation data indicate the presence of one general area of soil contamination beneath the site (Figure 4). This area appears to extend around, and beneath, the former excavation limits and former fuel dispenser at TPHg concentrations ranging to 3,600 mg/Kg and TPHd concentrations ranging to 1,200 mg/Kg with an area of approximately 780 sq. ft.

Based on cumulative soil analytical data collected to date, the estimated average residual TPHg and TPHd concentrations in soil are 723 mg/Kg and 215 mg/Kg, respectively. The resulting estimate of residual sorbed-phase TPHg and TPHd mass is approximately 563 lbs. (92.5 gal.) and 168 lbs. (27 gal), respectively.

Additionally, using the above average TPHg and TPHd residual sorbed phase concentrations as a conservative estimate for sorbed-phase hydrocarbons removed during overexcavation activities, and the size of the final excavation (approximately 75 cubic yards), Blue Rock estimates that the amount of sorbed-phase TPHg and TPHd contamination removed during the excavation activities of 1998 to be approximately 153 lbs. (25 gal.) and 45 lbs. (7 gal) respectively. Mass Calculations are presented in Appendix B

Dissolved-Phase Contamination

Cumulative investigation indicates that the residual dissolved-phase TPHg contaminant plume is currently limited to an approximate 737 ft^2 area and the residual dissolved phase MTBE contaminant plume is currently limited to an approximate 7,610 ft^2 area. Mass calculations for dissolved phase gasoline and MTBE were calculated separately as the impacted area for each contaminant range differs. Dissolved-phase TPHg and MTBE calculations were performed using the most recent groundwater analytical results from the fourth quarter 2005. The following calculations estimate the extent of the residual mass remaining in place.

The total area for each of the two contaminants (TPHg and MTBE) was divided into separate areas as applicable according to the range of contamination present in that area. The maximum extent of the residual dissolved-phase TPHg contaminant plume in October 2005 was approximately 35 feet long (parallel to groundwater flow) and 25 feet wide (perpendicular to groundwater flow) and the maximum extent of the dissolved phase MTBE plume in October 2005 was approximately 130 feet long (parallel to groundwater flow) and 70 feet wide (perpendicular to groundwater flow).

The area containing concentrations of dissolved-phase gasoline-range contaminants (TPHg) in October 2005 was limited to a 737 ft^2 area (zone 1). Average concentrations of dissolved-phase TPHg in this location were 330 µg/L. The core of the plume is located near MW-2 (Figure 5a). Approximately 0.11 lb. or 0.02 of gallons of gasoline-range hydrocarbons resided in the dissolved-phase in this area (Appendix B).

The area containing concentrations of dissolved-phase MTBE contaminants in October 2005 was limited to an approximate 7,610 ft^2 area (zones 1 through 4). Average concentrations of dissolved-phase MTBE at the plume core near MW-2 were 370 µg/L (Figure 5b). Approximately 0.12 lbs. or 0.002 gallons of MTBE resided in the dissolved-phase in zones 1 through 4) (Appendix B).

First Order Exponential Decay Rates

Concentrations of dissolved-phase TPHg and MTBE in MW-2 have decreased consistently over the duration of the quarterly groundwater monitoring program that was initiated in November 2001. The following section discusses current first order decay rate data.

Concentrations of TPHg and MTBE for well MW-2 and MTBE for well MW-5 were plotted against time since the initial groundwater monitoring event in November 2001 (Charts 1, 2 & 3) and an exponential curve was fitted to each plot (Appendix C). The method presented by Buscheck, O'Reilly, and Nelson (1993) was used to calculate first-order decay rates by the following equation:

$$C(t) = C_0 e^{-(kt)}$$

Where,

$C(t)$ is concentration as a function of time (t)
C_0 = is concentration as $t = 0$
k = is the decay rate (t^{-1})

During the most recent quarterly groundwater monitoring event, as displayed in Chart 1 and Chart 2, the TPHg first-order decay rate at MW-2 was 0.0008 day^{-1} and first order decay rate for MTBE at MW-2 was 0.0011 day^{-1}. Additionally, as displayed in Chart 3, the first-order decay rate at MW-5 for MTBE was 0.0016 day^{-1}. The first-order decay rates calculated for target analytes in selected monitoring wells correlate with the lower end of published values, which typically range from 0.001 day^{-1} to 0.01 day^{-1} (Buscheck, O'Reilly, and Nelson 1993).

Observed Dissolved-Phase Mass Reduction

Blue Rock calculated the current dissolved-phase mass based on the groundwater analytical data obtained in the fourth quarter 2005 groundwater monitoring event. Current calculations for the dissolved-phase mass for October 2005 indicate that approximately 0.11 lbs. (0.02 gallons) of TPHg and 0.12 lbs. (0.02 gallons) of MTBE remain dissolved in groundwater beneath the site. In contrast, the dissolved-phase mass calculations for TPHg and MTBE in January 2003 were 0.4 lbs. (0.07 gallons) and 0.8 lbs. (0.14 gallons) respectively (Appendix B). Based on these calculations, the dissolved-phase mass of TPHg and MTBE has diminished since the dissolved phase plume was fully defined with the current monitoring well network. Please refer to Figures 5c and 5d for the extent of TPHg and MTBE in January 2003.

Estimate of Time to Reach Water Quality Goals

The exponential first order decay rates for TPHg and MTBE in MW-2 (Chart 1 and Chart 2) and for MTBE in MW-5 (Chart 3) were used to predict when groundwater quality goals would be reached. Using the trend line calculations as shown in Chart 1 and 2, it appears that TPHg concentrations in groundwater will reach water quality goals (i.e. TPHg <50 µg/L) by approximately 2013 and MTBE concentrations in groundwater will reach water quality goals (i.e. MTBE = 5 µg/L) by approximately 2016 based on the trendline from MW-2. Based on the trendline calculations shown in Chart 3, it appears MTBE concentrations in groundwater will reach water quality goals by approximately 2006 based on the trendline for MW-5.

Additionally, it should be noted that the residual dissolved-phase plume is stable with no significant migration. This has been evidenced by concentrations of target analytes slightly above, or below, laboratory detection limits in downgradient and cross gradient monitoring points for the duration of the quarterly groundwater monitoring program.

Sensitive Receptor Survey Summary

In December 2002, a sensitive receptor survey was conducted by Clearwater Group and submitted with the *Monitoring Well Installation and Fourth Quarter 2002 Groundwater Monitoring Report* dated January 20, 2003. Clearwater visited the site as well as the search area to identify bodies of surface water, wetlands, and schools, to map underground utilities adjacent to the site. Clearwater searched HCDEH and DWR well records to identify well locations. Clearwater also interviewed City of Eureka Engineering and Humboldt County Public Works personnel to evaluate locations and depths of any underground utilities near the site. The following was reported by Clearwater.

The area surrounding the site is comprised of mixed residential, commercial, and rural. All homes and businesses (except Fred's Body Shop) in the search area use private wells for domestic water. The nearest downgradient domestic water well (#14 Table 4) is located at 7711 Myrtle Avenue approximately 150 feet to the west-southwest (downgradient) of monitoring well MW-5. According to the property owner the well is approximately 60 feet deep. The date of installation and the screened interval of this well are not known. Water from this well has been sampled periodically through the course of the monitoring program and has been found to be free of detectable target analytes (Table 5). Another domestic well (#15 Table 4) is present onsite and is approximately 260 feet northwest of the store. This well provides water for the Indianola Market, Alto Brothers Trucking Office, and the rental home west of the market. According to Cecil Alto, the well was installed in 1954 and is 110 feet deep. The screened interval of this well is not known. The Body Shop at the corner of Indianola Cutoff Road and Myrtle Avenue utilizes City of Eureka water. The City's water source is from a municipal well located in the Mad River.

Drainage ditches run north/south on each side of Myrtle Avenue. One drainage ditch runs along the south side of Indianola Cutoff Road. No other surface water bodies exist within the 1,000 foot search area.

The City of Eureka has a 24-inch concrete encased water main running down the center of Myrtle Avenue approximately 35 feet east of the former UST locations. The approximate depth of burial of this line is 6-8 feet bgs. PG&E gas lines enter the site on the north and south side of the market with a depth of burial not exceeding 3 feet bgs. The subject site as well as surrounding properties are served by septic systems. No other utilities are buried within the search area.

No schools or other potential sensitive receptors were identified in Clearwater's survey.

Summary and Conclusions

Cumulative investigation has indicated that the subsurface is composed of interbedded layers of elastic silts, sandy silts and sands (MH, ML, SW) to depths ranging from 2 to 20 feet bgs. The site is primarily underlain by sediments characterized as elastic silts (MH). The elastic silt is underlain by sandy silt (ML) and sands (SW) from about 10 to 20 feet bgs. Site cross sections are presented in Figures 2a and 2b. Boring logs are presented in Appendix A.

Groundwater is present in unconfined conditions beneath the site at depths of approximately 1.5 to 7 feet bgs with seasonal depth to water fluctuations of approximately 5.5 feet. The direction of groundwater flow historically has been calculated to be toward the southwest at gradients ranging from 0.017 ft/ft to 0.05 ft/ft.

Historic cumulative soil and groundwater sample analytical data indicate that diesel and gasoline range hydrocarbons TPHd, TPHg, BTEX and MTBE are the contaminants of concern beneath the site (Tables 1 and 2).

It appears that site contaminants have the ability to transport through the subsurface at rates ranging from 0.000405feet/day to 4.05 feet/day using Darcy's Law. However, it appears that a combination of natural attenuation processes are occurring within the plume which is preventing significant offsite migration of petroleum hydrocarbons based on analytical results slightly above detection limits in groundwater samples collected from MW-5.

Approximately 563 lb. or 92.5 gallons of gasoline-range hydrocarbons and 168 lb. or 27 gallons of diesel range hydrocarbons remain sorbed to soil beneath the site (Appendix D) and approximately 32 gallons of sorbed-phase gasoline and diesel-range hydrocarbons were removed during overexcavation activities of 1998.

The dissolved-phase mass of gasoline range contamination was calculated at approximately 0.40 lb. or 0.07 gallons and the dissolved-phase MTBE mass was calculated at approximately 0.80 lb. or 0.14 gallons in January 2003 following the installation of MW-4 and MW-5. The most recent data indicate that the residual dissolved-phase TPHg and MTBE masses are 0.11 lb. or 0.02 gallons and 0.12 lb. or 0.02 gallons, respectively. This indicates a mass removal and/or attenuation of 0.8 gallons of dissolved-phase gasoline-range hydrocarbons since January 2003.

During the most recent quarterly groundwater monitoring event, as displayed in Chart 1 and Chart 2, the TPHg first-order decay rate at MW-2 was 0.0008 day^{-1} and first order decay rate for MTBE at MW-2 was 0.0011 day^{-1}. Additionally, as displayed in Chart 3, the first-order decay rate at MW-5 for MTBE was 0.0016 day^{-1}.

The exponential first order decay rates for TPHg and MTBE in MW-2 (Chart 1 and Chart 2) and for MTBE in MW-5 (Chart 3) were used to predict when groundwater quality goals would be reached. Using the trend line calculations as shown in Chart 1 and 2, it appears that TPHg concentrations in groundwater will reach water quality goals (i.e. TPHg <50 µg/L) by approximately 2013 and MTBE concentrations in groundwater will reach water quality goals (i.e. MTBE = 5 µg/L) by approximately 2016 based on the trendline from MW-2. Based on the

trendline calculations shown in Chart 3, it appears MTBE concentrations in groundwater will reach water quality goals by approximately 2006 based on the trendline for MW-5.

The residual plume of dissolved-phase gasoline range hydrocarbons is stable with no significant migration. This has been evidenced by concentrations of target analytes below, or slightly above, laboratory detection limits in downgradient and cross gradient monitoring points since the dissolved-phase plume was fully defined. Although some residual sorbed-phase hydrocarbon contamination is present in the area of the former USTs, the rate of natural attenuation processes appears greater than of partitioning of sorbed-phase hydrocarbons into dissolved-phase.

Based on the sensitive receptor survey performed by Clearwater, no impact to sensitive receptors is occurring. The nearest downgradient domestic well located at 7711 Myrtle Avenue (Table 5) has remained free of detectable target analytes (Table 3). Buried utilities near the site do not appear to be acting as migratory pathways for contaminated groundwater.

Recommendations

- Based on the data presented in this report, Blue Rock requests that this site be evaluated for regulatory closure.
- Once concurrence with site closure is received a contingency plan for the safe handling of potentially impacted soil and / or groundwater that may be encountered in the event subsurface work occurs in the plume area.
- Following concurrence with site closure the five site monitoring wells should be destroyed.

References

Buscheck, T.E., O'Reilly, K.T., and Nelson, S.N. 1993. *Evaluation of Intrinsic Bioremediation at Field Sites*. Proceedings of the Conference of Petroleum Hydrocarbons and Organic Chemicals in Ground Water, National Groundwater Association/API, Houston, TX. November 10-12.

Freeze, R.A. and Cherry, J.A. 1979. *Groundwater*. Prentice-Hall, Inc., Englewood Cliffs, NJ, 604 p.

Certification

This report was prepared under the supervision of a California Professional Geologist at Blue Rock. All statements, conclusions, and recommendations are based upon published results from past consultants, field observations by Blue Rock, and analyses performed by a state-certified laboratory as they relate to the time, location, and depth of points sampled by Blue Rock. Interpretation of data, including spatial distribution and temporal trends, are based on commonly used geologic and scientific principles. It is possible that interpretations, conclusions, and recommendations presented in this report may change, as additional data become available and/or regulations change.

Information and interpretation presented herein are for the sole use of the client and regulating agency. The information and interpretation contained in this document should not be relied upon by a third party.

The service performed by Blue Rock has been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the area of the site. No other warranty, expressed or implied, is made.

If you have any questions regarding this project, please contact us at (707) 441-1934.

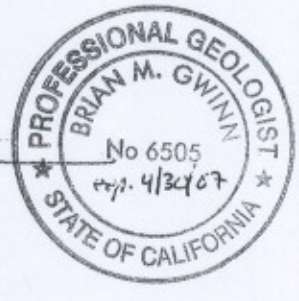
Sincerely,
Blue Rock Environmental, Inc.

Prepared by:

Andrew LoCicero
Project Scientist

Reviewed by:

Brian Gwinn, PG
Principal Geologist



Attachments

- Table 1: Cumulative Soil Analytical Data
- Table 2: Grab Groundwater Analytical Data
- Table 3: Groundwater Elevations and Analytical Results
- Table 4: Well Construction Details
- Table 5: Domestic Wells Located Within the 1,000 Foot SRS Search Area
- Figure 1: Site location Map
- Figure 2: Site Plan
- Figure 2a: Cross Section A-A'
- Figure 2b: Cross Section B-B'
- Figure 3: Groundwater Elevations and Gradient Map – 10/11/05
- Figure 4: Sorbed-Phase Hydrocarbon Distribution
- Figure 5a: Dissolved-Phase TPHg Distribution – 10/11/05
- Figure 5b: Dissolved-Phase MTBE Distribution – 10/11/05
- Figure 5c: Dissolved-Phase TPHg Distribution – 1/13/03
- Figure 5d: Dissolved-Phase MTBE Distribution – 1/13/03
- Appendix A: Boring Logs
- Appendix B: Mass Calculations for Sorbed and Dissolved-Phase Contaminants
- Appendix C: First Order Decay Rate

Cc:

Beverly Alto
7803 Myrtle Avenue
Eureka, CA 95503

Jerry Avila
7769 Myrtle Avenue
Eureka, CA 95503

TABLES

Table 1
SOIL ANALYTICAL DATA
Indianola Market
7769 Myrtle Avenue
Eureka, California
Project No. NC-018

Sample ID	Sample Depth (feet bgs)	Sample Date	TPHg (mg/kg)	TPHd (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	DIPE (mg/kg)	TAME (mg/kg)	ETBE (mg/kg)	TBA (mg/kg)	Methanol (mg/kg)	Ethanol (mg/kg)	Total Lead (µg/g)
#1	--	9/29/98	**3,600**	--	**1.6**	**0.82**	**100**	**140**	**4.1**	<0.02	**0.15**	<0.02	**0.20**	--	--	--
#2	--	9/29/98	**880**	--	**0.50**	**0.58**	**2.0**	**8.4**	**4.0**	<0.02	**0.47**	<0.02	**0.59**	--	--	--
B-1	5	10/1/01	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.2	<0.01	**2.9**
B-1	10	10/1/01	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.2	<0.01	**4.1**
B-2	4	10/1/01	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.2	<0.02	**3.4**
B-2	8	10/1/01	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.01	<0.2	<0.02	**2.8**
B-3	4	10/2/01	**4**	**2.2**	<0.005	<0.005	<0.005	<0.005	**0.38**	<0.005	<0.005	<0.005	**0.018**	<0.2	<0.02	**6.3**
B-3	7	10/2/01	<1	<1	<0.005	<0.005	<0.005	<0.005	**0.25**	<0.005	<0.005	<0.005	**0.14**	<1	<0.05	**5**
B-4	4	10/2/01	**9.4**	**49**	<0.005	<0.005	<0.005	<0.01	**0.082**	<0.005	<0.005	<0.005	**0.043**	<1	<0.05	**3.1**
B-4	7	10/2/01	<1	<1	<0.005	<0.005	<0.005	<0.005	**0.035**	<0.005	<0.005	<0.005	**0.0081**	<0.2	<0.01	**4.3**
B-5	4	10/2/01	<1	<1	<0.005	<0.005	<0.005	<0.005	**0.0074**	<0.005	<0.005	<0.005	<0.005	<0.2	<0.01	**5.1**
B-5	7	10/2/01	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.2	<0.01	**2.7**
MW-1	5	11/7/01	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	**5.7**
MW-1	10	11/7/01	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	**6.7**
MW-1	15	11/7/01	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	**5.9**
MW-1	20	11/7/01	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	**5.0**
MW-2	10	11/7/01	<1	<1	<0.005	<0.005	<0.005	<0.005	**0.058**	<0.005	<0.005	<0.005	**0.015**	--	--	**4.8**
MW-2	15	11/7/01	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	**6.2**
MW-2	20	11/7/01	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	**4.4**
MW-3	5	11/7/01	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	**3.8**
MW-3	10	11/7/01	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	**3.6**
MW-3	15	11/7/01	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	**3.7**
MW-4	5	10/10/02	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--
MW-4	10	10/10/02	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--
MW-4	15	10/10/02	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--
MW-4	20	10/10/02	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--
MW-5	5	10/10/02	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--
MW-5	10	10/10/02	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--
MW-5	15	10/10/02	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--
MW-5	20	10/10/02	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--

Table 1
SOIL ANALYTICAL DATA
Indianola Market
7769 Myrtle Avenue
Eureka, California
Project No. NC-018

Sample ID	Sample Depth (feet bgs)	Sample Date	TPHg (mg/kg)	TPHd (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	MTBE (mg/kg)	DIPE (mg/kg)	TAME (mg/kg)	ETBE (mg/kg)	TBA (mg/kg)	Methanol (mg/kg)	Ethanol (mg/kg)	Total Lead (µg/g)
B-6	2	6/11/03	**170**	**1200**	**0.044**	<0.025	**1.6**	**0.11**	**0.046**	<0.025	<0.025	<0.025	<0.25	--	--	--
B-6	4	6/11/03	**100**	**86**	**0.083**	<0.025	**1.3**	**1.1**	**0.79**	<0.025	<0.025	<0.025	<0.25	--	--	--
B-7	5	6/11/03	**920**	**160**	**0.063**	<0.05	**4.0**	**5.2**	**0.14**	<0.05	<0.05	<0.05	<0.25	--	--	--
B-7	8	6/11/03	<1	<1	<0.005	<0.005	<0.005	<0.005	**0.91**	<0.005	<0.005	<0.005	<0.005	--	--	--
B-7	10	6/11/03	**100**	**7.1**	<0.025	<0.025	**0.25**	**0.42**	**0.29**	<0.025	<0.025	<0.025	<0.25			
B-8	2	6/11/03	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--
B-8	4	6/11/03	<1	**4.2**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--
B-8	5	6/11/03	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--
B-9	10	6/11/03	<1	<1	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--

Notes :
mg/kg = milligrams per kilogram
TPHd: Total Petroleum Hydrocarbons as Diesel by Method 3550/8015M
TPHg: Total Petroleum Hydrocarbons as Gasoline by Method 5030/8260B
Benzene: by Method 8260B
Toluene: by Method 8260B
Ethylbenzene: by Method 8260B
Xylenes: by Method 8260B
DIPE: Di-Isopropyl Ether by Method 8260B
TAME: Tertiary Amyl Methyl Ether by Method 8260B
ETBE: Ethyl Tertiary Butyl Ether by Method 8260B
TBA: Tertiary Butyl Alcohol by Method 8260B
Methanol: by Method 8260B
Ethanol: by Method 8260B
Total Lead: by EPA Method 6010

Table 2
GRAB GROUNDWATER ANALYTICAL DATA
Indianola Market
7769 Myrtle Avenue,
Eureka, California
Project No. NC-18

Sample ID	Sample Date	TPHd (µg/L)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	DIPE (µg/L)	TAME (µg/L)	ETBE (µg/L)	TBA (µg/L)	Methanol (µg/L)	Ethanol (µg/L)	Lead (µg/L)
#8	9/29/98	--	--	--	--	--	--	**25,000**	<50	**150**	**64**	<500	--	--	--
B-1	10/1/01	**120**	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	**98**	<5	<5
B-2	10/1/01	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	**59**	<5	<5
B-3	10/1/01	<100	<200	**2.7**	<2	**2.3**	**2.2**	**1,900**	<2	**10**	**9.2**	**100**	<5,600	<20	<5
B-4	10/1/01	<50	**54**	<0.5	<0.5	<0.5	<0.5	**190**	<0.5	**1.7**	<0.5	**18**	<1,100	<5	<5
B-5	10/1/01	<50	<50	<0.5	<0.5	<0.5	<0.5	**41**	<0.5	<0.5	<0.5	<5	<150	<5	<5
B-9	6/11/03	**270**	<50	<0.5	<0.5	**1.7**	**1.7**	**17**	<0.5	<0.5	<0.5	<5	--	--	--

Notes

µg/L = micrograms per liter

"-": Not analyzed, available, or applicable

TPHd: Total Petroleum Hydrocarbons as Diesel by EPA Method 3510/8015M

TPHg: Total Petroleum Hydrocarbons as Gasoline by EPA Method 5030/8260B

Benzene by EPA Method 8260B

Toluene by EPA Method 8260B

Ethylbenzene by EPA Method 8260B

Xylenes by EPA Method 8260B

MTBE: Methyl Tertiary Butyl Ether by EPA Method 8260B
DIPE: Di-Isopropyl Ether by EPA Method 8260B
TAME: Tertiary Amyl Methyl Ether by EPA Method 8260B
ETBE: Ethyl Tertiary Butyl Ether by EPA Method 8260B
TBA: Tertiary Butyl Alcohol by EPA Method 8260B
Methanol by EPA Method 8260B
Ethanol by EPA Method 8260B
Dissolved Lead by EPA Method 200.8

Table 3
GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS
Indianola Market
7769 Myrtle Avenue
Eureka, California
Project No. NC-18

Well No.	Sampling Date	TOC (feet)	DTW (feet)	GWE (feet)	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	DIPE (µg/L)	TAME (µg/L)	ETBE (µg/L)	TBA (µg/L)	Ethanol (µg/L)	Methanol (µg/L)
MW-1	11/20/01	99.99	5.15	94.84	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<50
	2/2/02	99.99	2.58	97.41	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<50
Screen	5/2/02	99.99	2.67	97.32	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	<5	<50
3'-20'	8/2/02	99.99	5.07	94.92	<50	<50	<0.5	<0.5	<0.5	<0.5	**0.99**	<0.5	<0.5	<0.5	<5	--	--
	(10/15/02)	32.22	6.77	25.45	<50	<50	<0.5	<0.5	<0.5	<0.5	**0.57**	<0.5	<0.5	<0.5	<5	--	--
	1/13/03	32.22	2.03	30.19	<50	<50	<0.5	<0.5	<0.5	<0.5	**0.51**	<0.5	<0.5	<0.5	<5	--	--
	4/1/03	32.22	1.33	30.89	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	--	--
	7/10/03	32.22	4.33	27.89	<50	**66**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	--	--
	10/2/03	32.22	7.07	25.15	<50	**110**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	--	--
	1/5/04	32.22	3.38	28.84	<50	**58**	<0.5	<0.5	<0.5	<0.5	**2.9**	<0.5	<0.5	<0.5	<5	--	--
	4/6/04	32.22	2.85	29.37	<50	**81**	<0.5	<0.5	<0.5	<0.5	**3.2**	<0.5	<0.5	<0.5	<5	--	--
	7/1/04	32.22	4.92	27.30	<50	<50	<0.5	<0.5	<0.5	<0.5	**3.6**	<0.5	<0.5	<0.5	<5	--	--
	10/1/04	32.22	7.04	25.18	<50	--	<0.5	<0.5	<0.5	<0.5	**1.5**	--	--	--	--	--	--
	1/4/05	32.22	2.05	30.17	<50	--	<0.5	<0.5	<0.5	<0.5	**1.6**	--	--	--	--	--	--
	4/18/05	32.22	2.40	29.82	<50	--	<0.5	<0.5	<0.5	<0.5	**1.1**	--	--	--	--	--	--
	7/1/05	32.22	3.15	29.07	<50	--	<0.5	<0.5	<0.5	<0.5	**0.76**	--	--	--	--	--	--
	10/11/05	32.22	5.51	26.71	<50	--	<0.5	<0.5	<0.5	<0.5	**0.71**	--	--	--	--	--	--
MW-2	11/20/01	99.15	4.92	94.23	**300**	<200	<2	<2	<2	<2	**1,100**	<2	**5.3**	**4**	**35**	<20	<200
	2/2/02	99.15	2.31	96.84	**1,400**	<500	<5	<5	<5	<5	**1,900**	<5	**5.5**	**5.4**	**63**	<50	<500
Screen	5/2/02	99.15	2.47	96.68	**1,000**	<350	**3.1**	<2.5	<2.5	<2.5	**1,200**	<2.5	**5.8**	**5.5**	**33**	--	--
3'-20'	8/2/02	99.15	4.77	94.38	**650**	<400	<5	<5	<5	<5	**2,300**	<5	**12**	**6.1**	**71**	--	--
	(10/15/02)	31.33	6.49	24.84	**73**	<100	<0.5	<0.5	<0.5	<0.5	**310**	<0.5	**1.9**	**0.84**	**7.7**	--	--
	1/13/03	31.33	1.97	29.36	**1,500**	<800	**2.6**	<0.2	<0.2	**3.2**	**1,300**	<0.2	**7.3**	**4.6**	**41**	--	--
	4/1/03	31.33	2.07	29.26	**1,000**	<1,100	<2	<2	<2	**2.8**	**940**	<2	**5.4**	**3.4**	**25 1**	--	--
	7/10/03	31.33	4.09	27.24	**1,100**	<600	<2	<2	<2	<2	**1,000**	<2	**5.8**	**4**	**25 1**	--	--
	10/2/03	31.33	6.80	24.53	**1,000**	<800	<2.5	<2.5	<2.5	<2.5	**1,100**	<2.5	**7.7**	**5**	**32 1**	--	--
	1/5/04	31.33	2.76	28.57	**1,300**	<1,000	<1.5	<1.5	<1.5	<1.5	**740**	<1.5	<1.5	**4**	**22**	--	--
	4/6/04	31.33	2.58	28.75	**280**	**120**	<0.5	<0.5	<0.5	<0.5	**120**	<0.5	**0.72**	**0.82**	<5	--	--
	7/1/04	31.33	4.56	26.77	**510**	**690**	<1.5	<1.5	<1.5	<1.5	**800**	<1.5	**7.10**	**2.4**	**27**	--	--
	10/1/04	31.33	6.71	24.62	<50	<50[2]	<0.5	<0.5	<0.5	<0.5	**130**	--	--	--	--	--	--
	1/4/05	31.33	1.85	29.48	**580**	<80[2]	<1.5	<1.5	<1.5	<1.5	**580**	--	--	--	--	--	--
	4/18/05	31.33	2.08	29.25	**620**	<500[2]	<1.0	<1.0	<1.0	<1.0	**510**	--	--	--	--	--	--
	7/1/05	31.33	2.57	28.76	**420**	<400[2]	<0.5	<0.5	<0.5	<0.5	**260**	--	--	--	--	--	--
	10/11/05	31.33	5.21	26.12	**370**	<80[2]	<0.5	<0.5	<0.5	<0.5	**370**	--	--	--	--	--	--
MW-3	11/20/01	99.30	3.36	95.94	<50	<50	<0.5	<0.5	<0.5	<0.5	**100**	<0.5	**0.85**	<0.5	**8.1**	<5	<50
	2/2/02	99.30	1.56	97.74	<50	<50	<0.5	<0.5	<0.5	<0.5	**2.4**	<0.5	<0.5	<0.5	<5	<5	<50
Screen	5/2/02	99.30	1.67	97.63	<50	<50	<0.5	<0.5	<0.5	<0.5	**6**	<0.5	<0.5	<0.5	<5	--	--
3'-20'	8/2/02	99.30	3.37	95.93	<50	<50	<0.5	<0.5	<0.5	<0.5	**89**	<0.5	**0.65**	<0.5	**5.3**	--	--
	(10/15/02)	31.47	5.06	26.41	<50	<50	<0.5	<0.5	<0.5	<0.5	**94**	<0.5	**0.79**	<0.5	<5	--	--
	1/13/03	31.47	1.44	30.03	<50	**56**	<0.5	<0.5	<0.5	<0.5	**340**	<0.5	**2.1**	<0.5	**27**	--	--

Table 3
GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS
Indianola Market
7769 Myrtle Avenue
Eureka, California
Project No. NC-18

Well No.	Sampling Date	TOC (feet)	DTW (feet)	GWE (feet)	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	DIPE (µg/L)	TAME (µg/L)	ETBE (µg/L)	TBA (µg/L)	Ethanol (µg/L)	Methanol (µg/L)
MW-3	4/1/03	31.47	1.37	30.10	**51**	<50	<0.5	<0.5	<0.5	<0.5	**280**	<0.5	**2**	<0.5	**18**	--	--
	7/10/03	31.47	2.80	28.67	<50	**89**	<0.5	<0.5	<0.5	<0.5	**89**	<0.5	**0.84**	<0.5	**6.4**	--	--
Screen	10/2/03	31.47	5.41	26.06	<50	**150**	<0.5	<0.5	<0.5	<0.5	**110**	<0.5	**0.71**	<0.5	<5	--	--
3'-20'	1/5/04	31.47	2.46	29.01	<50	<50	<0.5	<0.5	<0.5	<0.5	**11**	<0.5	<0.5	<0.5	<5	--	--
	4/6/04	31.47	1.71	29.76	<50	<50	<0.5	<0.5	<0.5	<0.5	**0.73**	<0.5	<0.5	<0.5	<5	--	--
	7/1/04	31.47	3.16	28.31	<50	<50	<0.5	<0.5	<0.5	<0.5	**80**	<0.5	<0.5	<0.5	<5	--	--
	10/1/04	31.47	5.26	26.21	<50	--	<0.5	<0.5	<0.5	<0.5	**61**	--	--	--	--	--	--
	1/4/05	31.47	1.43	30.04	<50	--	<0.5	<0.5	<0.5	<0.5	**9**	--	--	--	--	--	--
	4/18/05	31.47	1.48	29.99	<50	--	<0.5	<0.5	<0.5	<0.5	**2.2**	--	--	--	--	--	--
	7/1/05	31.47	1.01	30.46	<50	--	<0.5	<0.5	<0.5	<0.5	**1.4**	--	--	--	--	--	--
	10/11/05	31.47	3.88	27.59	<50	--	<0.5	<0.5	<0.5	<0.5	**18**	--	--	--	--	--	--
MW-4	10/15/02	32.74	4.99	27.75	<50	<50	<0.5	<0.5	<0.5	<0.5	**4.1**	<0.5	<0.5	<0.5	<5	--	--
	1/13/03	32.74	1.41	31.33	<50	<50	<0.5	<0.5	<0.5	<0.5	**0.92**	<0.5	<0.5	<0.5	<5	--	--
Screen	4/1/03	32.74	1.45	31.29	<50	<50	<0.5	<0.5	<0.5	<0.5	**0.70**	<0.5	<0.5	<0.5	<5	--	--
3'-20'	7/10/03	32.74	2.82	29.92	<50	<50	<0.5	<0.5	<0.5	<0.5	**7.9**	<0.5	<0.5	<0.5	<5	--	--
	10/2/03	32.74	5.32	27.42	<50	**99**	<0.5	<0.5	<0.5	<0.5	**6.9**	<0.5	<0.5	<0.5	<5	--	--
	1/5/04	32.74	2.60	30.14	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	--	--
	4/6/04	32.74	1.88	30.86	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	--	--
	7/1/04	32.74	3.19	29.55	<50	<50	<0.5	<0.5	<0.5	<0.5	**17**	<0.5	<0.5	<0.5	<5	--	--
	10/1/04	32.74	5.16	27.58	<50	--	<0.5	<0.5	<0.5	<0.5	**6.3**	--	--	--	--	--	--
	1/4/05	32.74	1.52	31.22	<50	--	<0.5	<0.5	<0.5	<0.5	**0.68**	--	--	--	--	--	--
	4/18/05	32.74	1.66	31.08	<50	--	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--
	7/1/05	32.74	1.98	30.76	<50	--	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--
	10/11/05	32.74	3.69	29.05	<50	--	<0.5	<0.5	<0.5	<0.5	**3.4**	--	--	--	--	--	--
MW-5	10/15/02	29.71	7.11	22.60	<50	<50	<0.5	<0.5	<0.5	<0.5	**32**	<0.5	<0.5	<0.5	<5	--	--
	1/13/03	29.71	0.66	29.05	<50	<50	<0.5	<0.5	<0.5	<0.5	**31**	<0.5	<0.5	<0.5	<5	--	--
Screen	4/1/03	29.71	1.75	27.96	<50	<50	<0.5	<0.5	<0.5	<0.5	**35**	<0.5	<0.5	<0.5	<5	--	--
5'-20'	7/10/03	29.71	4.60	25.11	<50	<50	<0.5	<0.5	<0.5	<0.5	**20**	<0.5	<0.5	<0.5	<5	--	--
	10/2/03	29.71	7.45	22.26	<50	<50	<0.5	<0.5	<0.5	<0.5	**9**	<0.5	<0.5	<0.5	<5	--	--
	1/5/04	29.71	2.31	27.40	<50	**85**	<0.5	<0.5	<0.5	<0.5	**29**	<0.5	<0.5	<0.5	<5	--	--
	4/6/04	29.71	2.53	27.18	<50	**68**	<0.5	<0.5	<0.5	<0.5	**38**	<0.5	<0.5	<0.5	<5	--	--
	7/1/04	29.71	4.95	24.76	**86**	**86**	<0.5	<0.5	<0.5	<0.5	**170**	<0.5	**1.4**	**0.97**	**17**	--	--
	10/1/04	29.71	7.26	22.45	<50	<50[2]	<0.5	<0.5	<0.5	<0.5	**2**	--	--	--	--	--	--
	1/4/05	29.71	0.78	28.93	<50	<50[2]	<0.5	<0.5	<0.5	<0.5	**5.3**	--	--	--	--	--	--
	4/18/05	29.71	2.02	27.69	<50	<50[2]	<0.5	<0.5	<0.5	<0.5	**8.2**	--	--	--	--	--	--
	7/1/05	29.71	3.27	26.44	<50	<50[2]	<0.5	<0.5	<0.5	<0.5	**92**	--	--	--	--	--	--
	10/11/05	29.71	5.72	23.99	<50	<50[2]	<0.5	<0.5	<0.5	<0.5	**5.6**	--	--	--	--	--	--

Table 3
GROUNDWATER ELEVATIONS AND ANALYTICAL RESULTS
Indianola Market
7769 Myrtle Avenue
Eureka, California
Project No. NC-18

Well No.	Sampling Date	TOC (feet)	DTW (feet)	GWE (feet)	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	DIPE (µg/L)	TAME (µg/L)	ETBE (µg/L)	TBA (µg/L)	Ethanol (µg/L)	Methanol (µg/L)
Dom - 1	4/1/03	(Domestic well located at 7711 Myrtle Ave.)			<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5	--	--
	1/4/05				<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--
	10/11/05				<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--
				MCL	--	--	1	150	300	1,750	5						
				Taste & odor threshold	5	100	--	42	29	17	5						
				NCRWQCB cleanup goals	<50	100	0.50	42	29	17	5						

Notes :

TOC: Top of casing referenced to mean sea level (4.33 NAVD 88 (NGS LV 0638) SS rod E1401 1988

Sample date in parentheses indates new wellhead survey per Geotracker

DTW: Depth to water as referenced to benchmark.

GWE: Ground water elevation as referenced to benchmark

µg/L=micrograms per liter

"--": Not analyzed, available, or applicable

MCL: Maximum contaminant level, an enforceable drinking water standard

Taste & odor threshold: A drinking water standard

1. Tert Butanol results may be biased high (see case narative in laboratory report)

2. TPHd analysis performed using silica gel cleanup

TPHg: Total Petroleum Hydrocarbons as Gasoline by Method 5030/8260B

TPHd: Total Petroleum Hydrocarbons as Diesel by Method 3510/8015M

MTBE: Methyl Tertiary Butyl Ether by Method 8260B

DIPE: Di-Isopropyl Ether by Method 8260B

TAME: Tertiary Amyl Methyl Ether by method 8260B

ETBE: Ethyl Tertiary Butyl Ether by Method 8260B

TBA: Tertiary Butyl Alcohol by Method 8260B

NCWQCB: North Coast Water Quality Control Board

Table 4
Well Construction Details
Indianola Market
7769 Myrtle Avenue
Eureka, CA
Project # NC-18

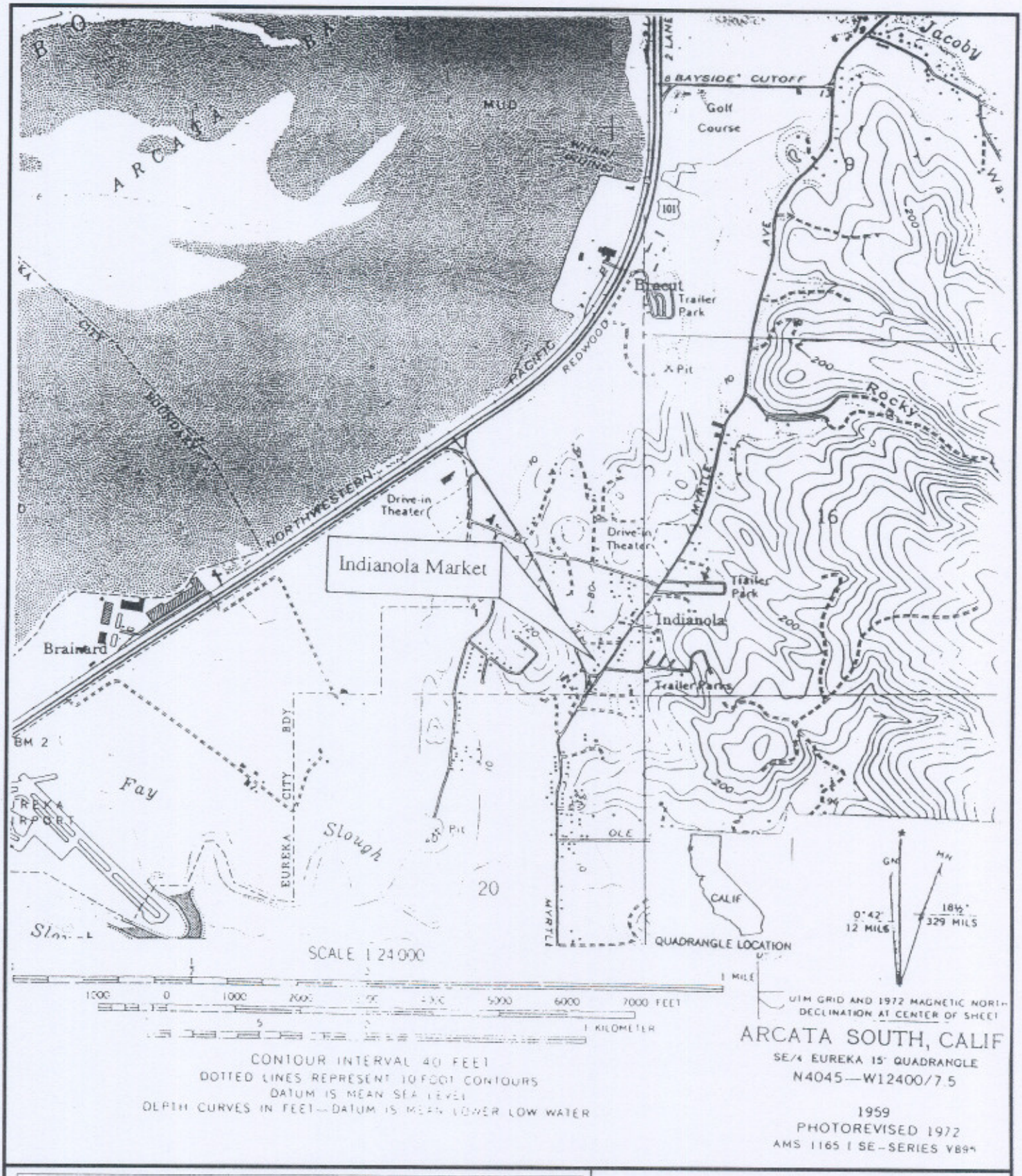
Well Identification	Date Intstalled	Intstalled by	Casing Diameter (inches)	Total Depth (feet)	Blank Interval (feet)	Screened Interval (feet)	Slot Size (inches)	Filter Pack (feet)	Bentonite Seal (feet)	Cement (feet)
MW-1	10/10/01	Clearwater	2	20	0-3	3-20	0.02	2-20	1-2	0-1
MW-2	10/10/01	Clearwater	2	20	0-3	3-20	0.02	2-20	1-2	0-1
MW-3	10/10/01	Clearwater	2	20	0-3	3-20	0.02	2-20	1-2	0-1
MW-4	10/7/02	Clearwater	2	20	0-3	3-20	0.02	2-20	1-2	0-1
MW-5	10/7/02	Clearwater	2	20	0-3	5-20	0.02	2-20	1-2	0-1

Table 5
Domestic Wells Located Within the 1,000 Foot SRS Search Area

Indianola Market
7769 Myrtle Avenue
Eureka, CA 95503
Project # NC-18

Well ID	Well Adress	Well Use	Year Installed	Depth of Well (feet)	Screened Interval-Slot Size
1	531 Indianola Road	Domestic	1988	153 feet	150-153 feet (3/16")
2	Rt. 1 Box 275 Old Arcata Road	Domestic	1966	120 feet	None
3	Rt. 1 Box 430 Old Arcata Road	Domestic/Irrigation	1973	155 feet	136-148 feet (0.018")
4	Old Arcata Road corner of Indianola	Domestic/Irrigation	1970	90 feet	74-80 feet (0.018")
5	7728 Indianola Road	Domestic	1991	191 feet	180-191 feet (4" & 3/4")
6	Indianola Road	Domestic	1962	82 feet	12 perf per row, 4 rows per foot
7	Old Arcata Road	Domestic/Irrigation	1971	80 feet	60-80 feet (3/16")
8	3855 Newell Road	Domestic	1985	220 feet	200-220 feet (5/32")
9	Rt. 1 Box 424 Bayside	Domestic	1975	115 feet	105-110 feet (3/16")
10	Indianola Cutoff Road	Domestic/Irrigation	1971	106 feet	100-106 feet (Gator 6 foot screen)
11	Old Arcata Road	Domestic	1970	169 feet	162.5-170.5 feet (#5 chisel)
12	Box 410 Bayside	Domestic/Irrigation	1968	100 feet	80-86 feet (1,000-18,000 slots)
13	Rt. 1 Box 265 Old Arcata Road	Domestic	1979	85 feet	(0.0018 sand screens)
14	7711 Myrtle Ave	Domestic	before 1950	60 feet	unknown
15	7769 Myrtle Ave	Domestic	1954	110 feet	unknown

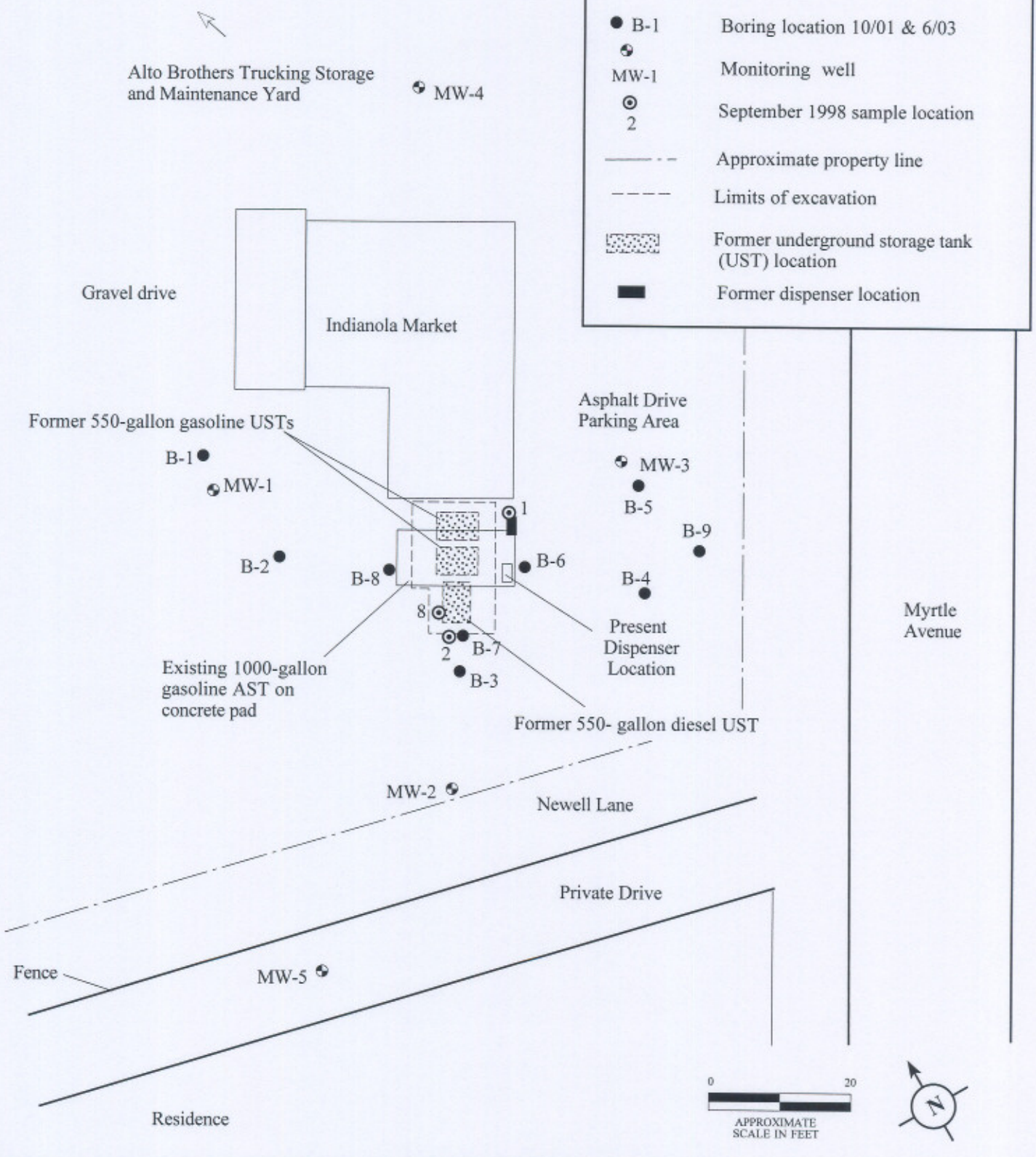
FIGURES



Site Location Map
Indianola Market
7769 Myrtle Avenue
Eureka, California

BLUE ROCK ENVIRONMENTAL, INC.

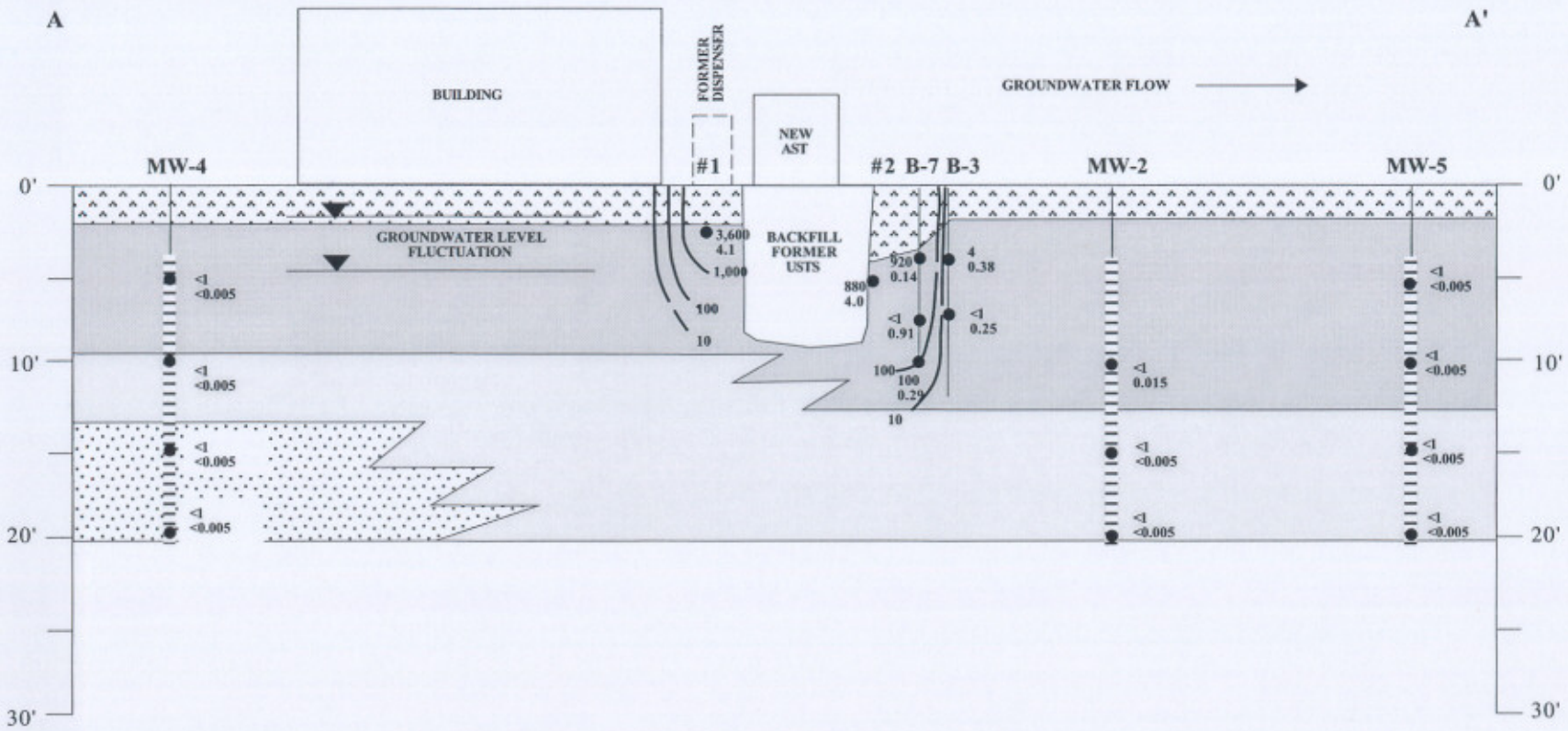
Project No.	Date	Figure
NC-18	**12/05**	**1**



SITE PLAN
Indianola Market
7769 Myrtle Ave.
Eureka, California

BLUE ROCK ENVIRONMENTAL, INC.

Project No.	Report Date	Figure
NC-18	**12/05**	**2**



EXPLANATION

MW-3 — BORING/WELL I.D.

LOGGED & SCREENED INETERVAL

3,600 = TPHg
4.1 = MTBE
TPHg AND MTBE CONCENTRATION (MG/KG) IN SOIL SAMPLES

10 — TPHg ISO-CONCENTRATION IN SOIL (MG/KG)

- ELASTIC SILT (MH)
- SANDY SILT (ML)
- SAND (SW)
- UST PIT BACKFILL
- BASEROCK FILL (GW)
- WATER TABLE ELEVATION
- SOIL SAMPLE

0' — 20'
10'

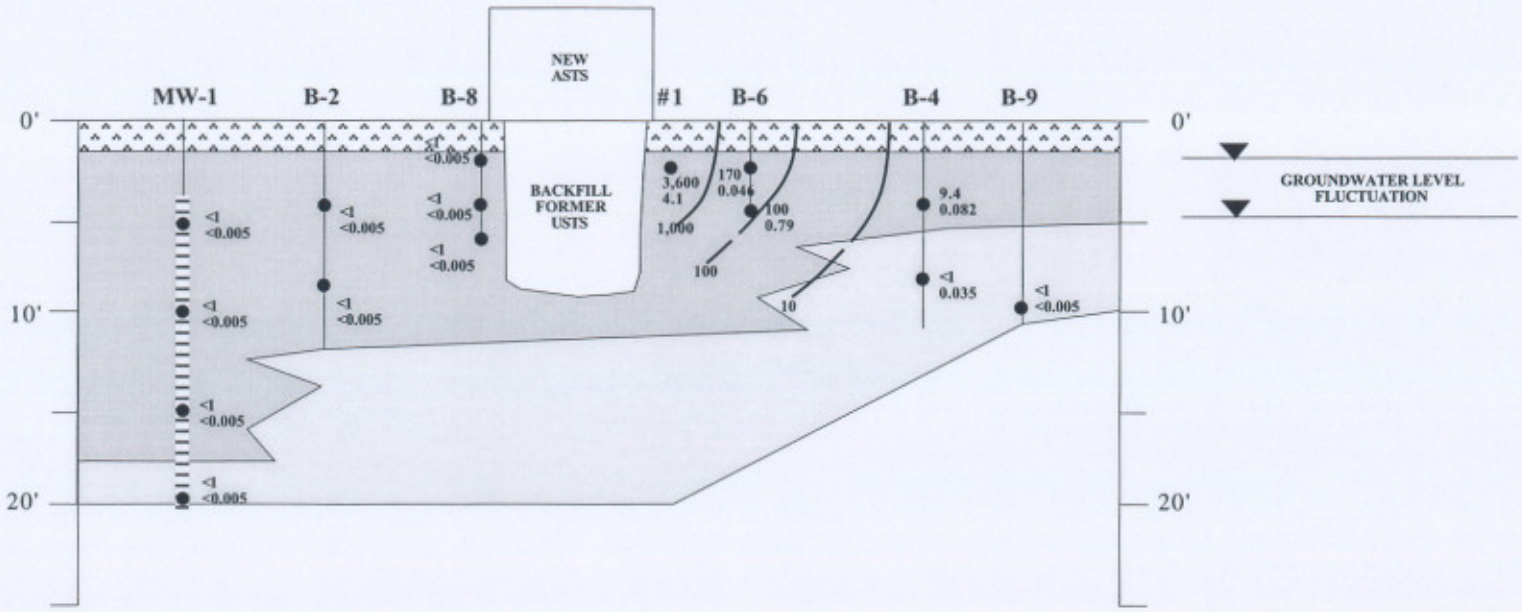
APPROXIMATE SCALE
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=10'

CROSS-SECTION A-A'

Indianola Market
7769 Myrtle Avenue
Eureka, CA

BLUE ROCK ENVIRONMENTAL, INC.

Project No.	Figure Date	Figure
NC-18	**12/05**	**2a**



EXPLANATION

- MW-3 — BORING/WELL I.D.
- LOGGED & SCREENED INETERVAL
- 3,600 = TPHg, 4.1 = MTBE — TPHg AND MTBE CONCENTRATION (MG/KG) IN SOIL SAMPLES
- 10 — TPHg ISO-CONCENTRATION IN SOIL (MG/KG)
- ELASTIC SILT (MH)
- SANDY SILT (ML)
- SAND (SW)
- UST PIT BACKFILL
- BASEROCK FILL (GW)
- WATER TABLE ELEVATION
- SOIL SAMPLE

0' 20' 10'

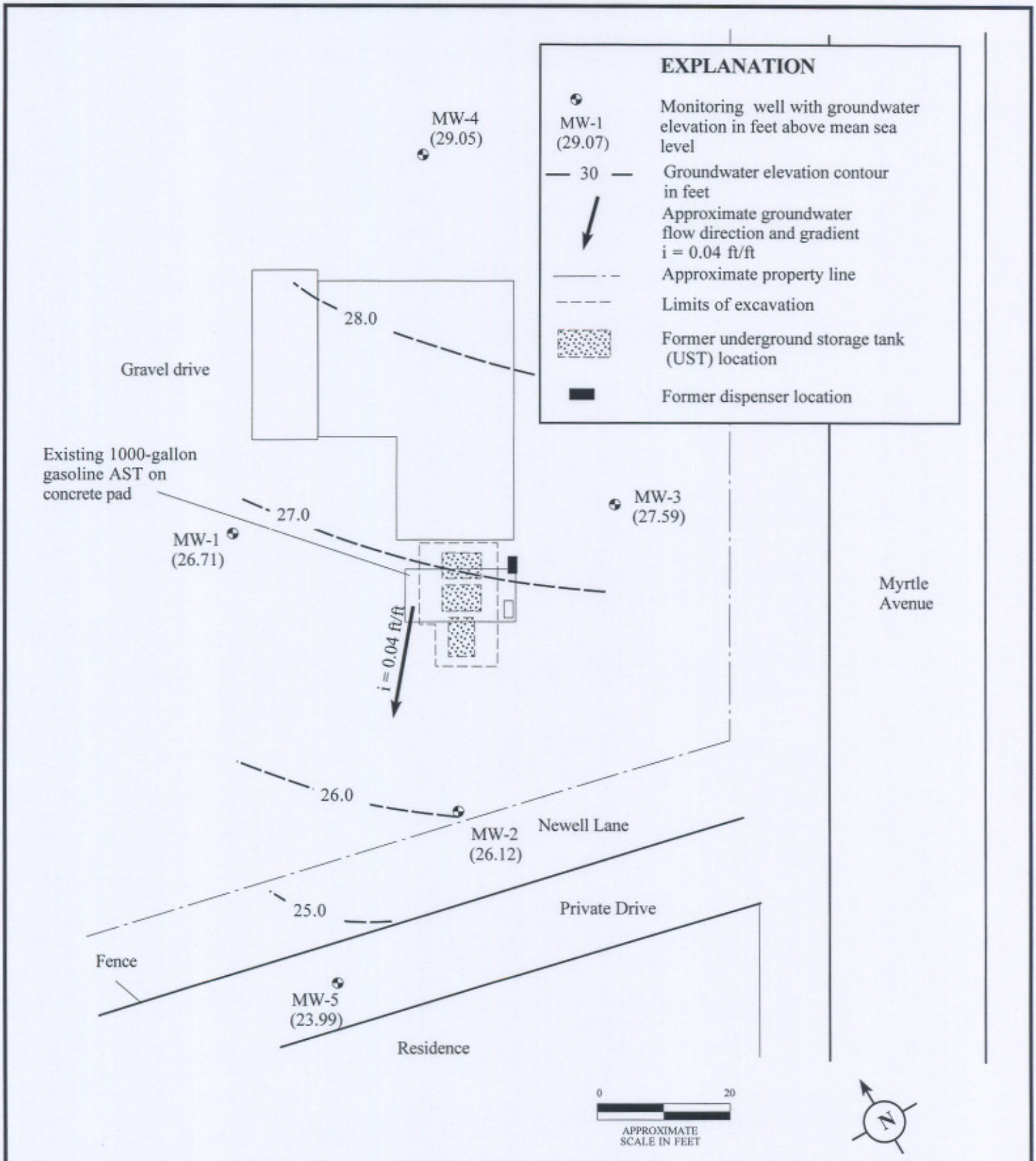
APPROXIMATE SCALE
HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=10'

CROSS-SECTION B-B'

Indianola Market
7769 Myrtle Avenue
Eureka, CA

BLUE ROCK ENVIRONMENTAL, INC.

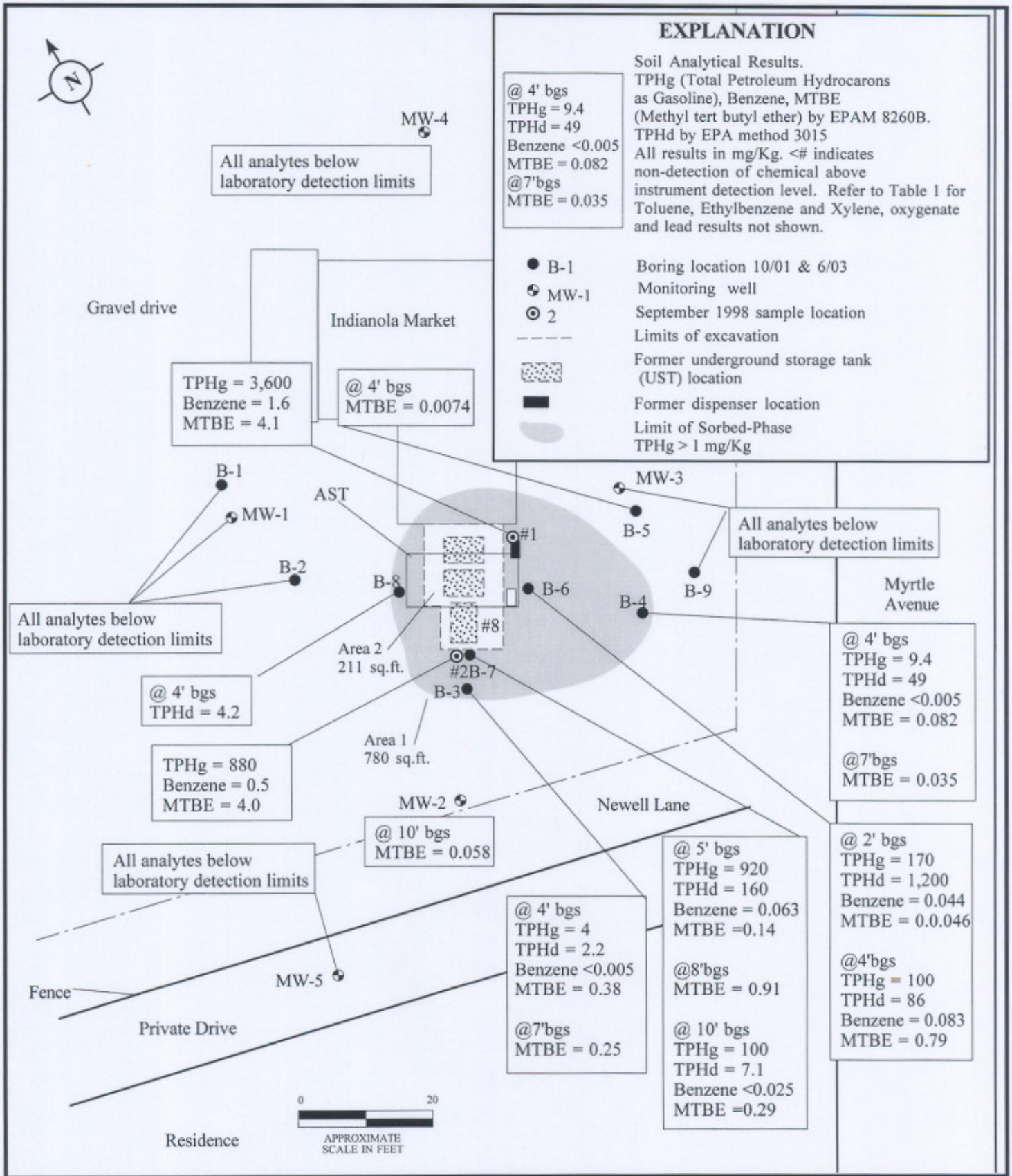
Project No.	Figure Date	Figure
NC-18	12/04	2b



GROUNDWATER ELEVATION MAP - 10/11/05
Indianola Market
7769 Myrtle Ave.
Eureka, California

BLUE ROCK ENVIRONMENTAL, INC.

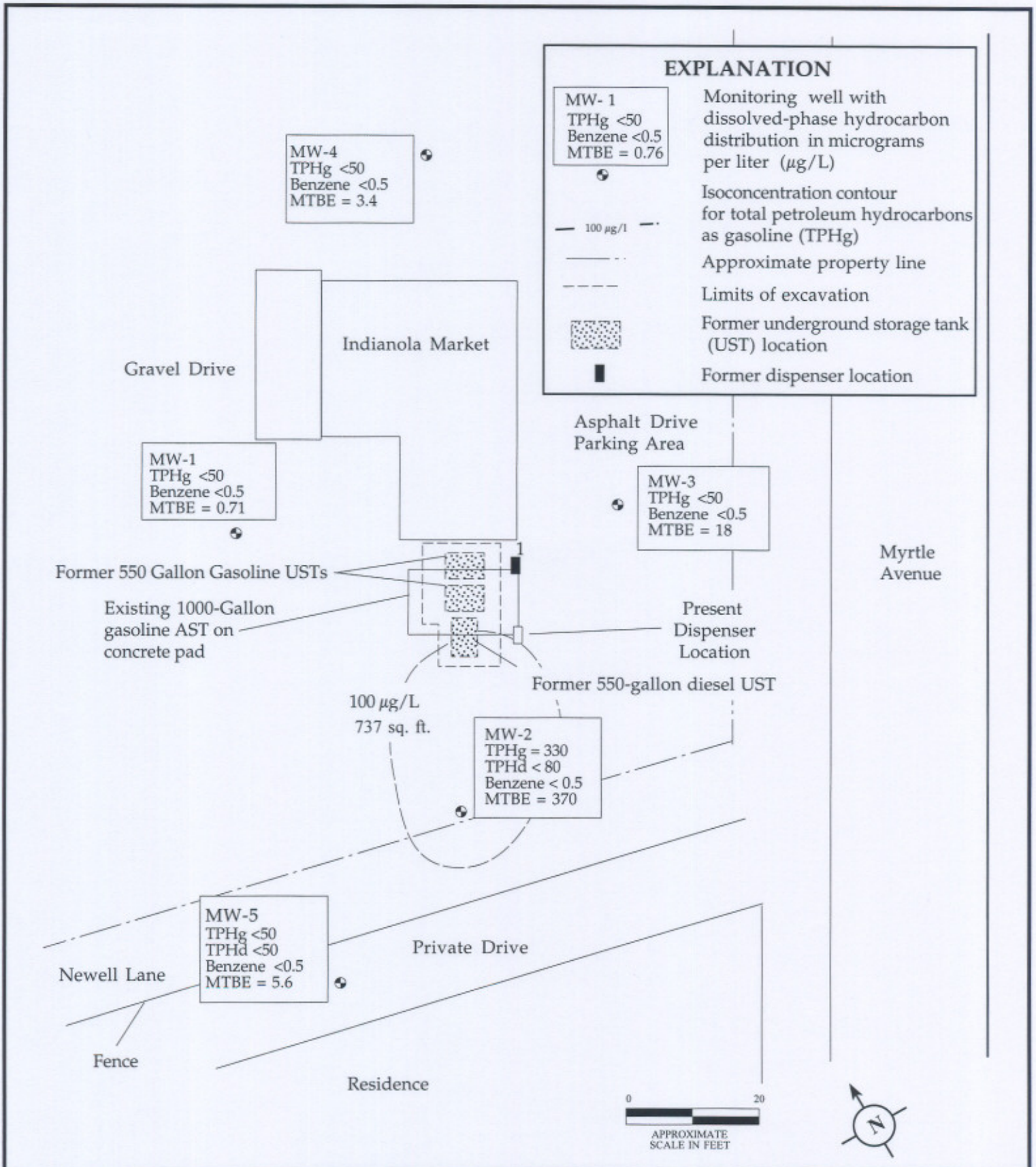
Project No.	Report Date	Figure
NC-18	**12/05**	**3**



Sorbed-Phase TPHg Distribution
Indianola Market
7769 Myrtle Avenue
Eureka, California

BLUE ROCK ENVIRONMENTAL, INC.

Project No.	Report Date	Figure
NC-18	**12/05**	**4**

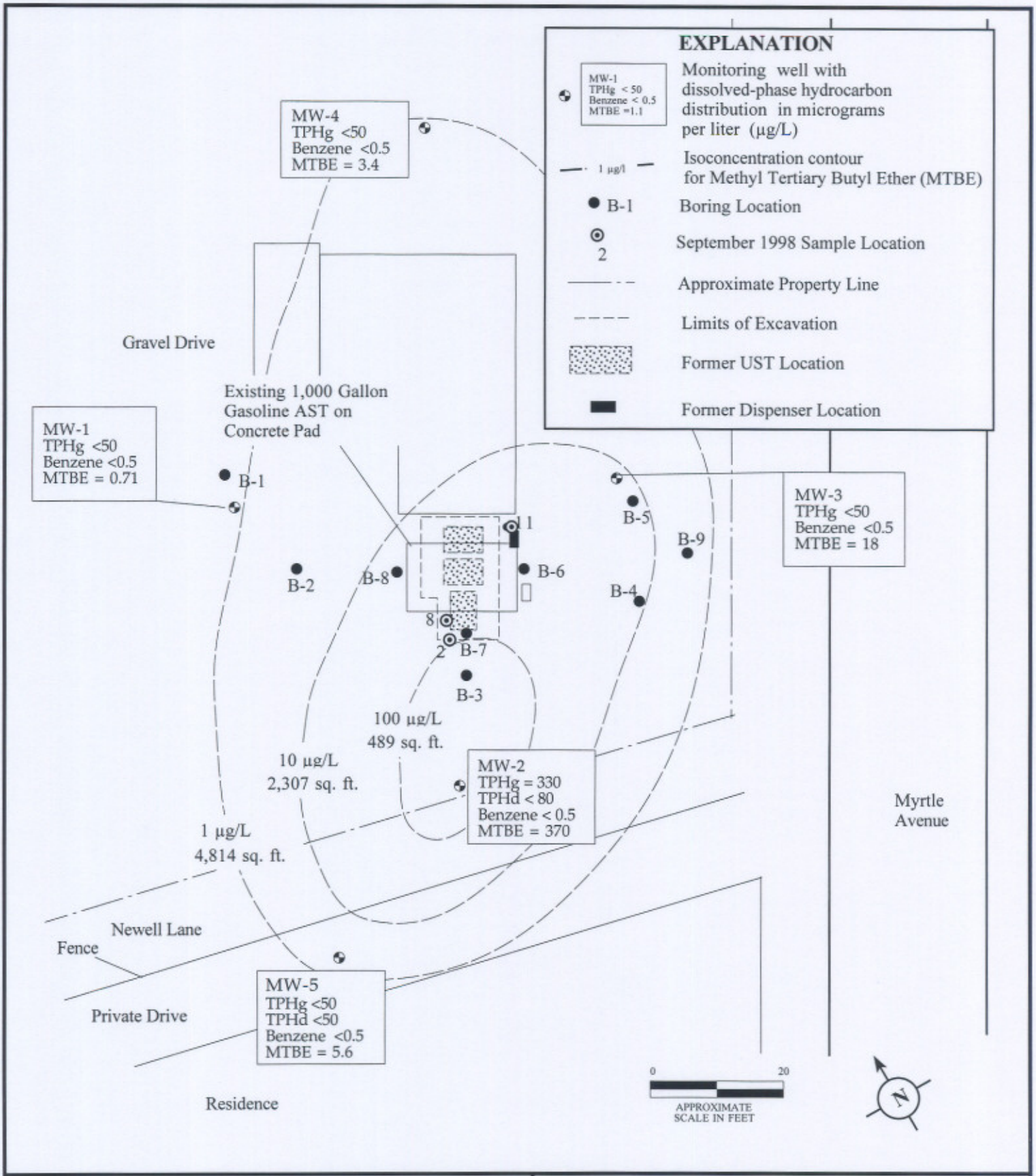


DISSOLVED-PHASE TPHg DISTRIBUTION - 10/11/05

Indianola Market
7769 Myrtle Ave.
Eureka, California

BLUE ROCK ENVIRONMENTAL, INC.

Project No.	Report Date	Figure
NC-18	**12/05**	**5a**

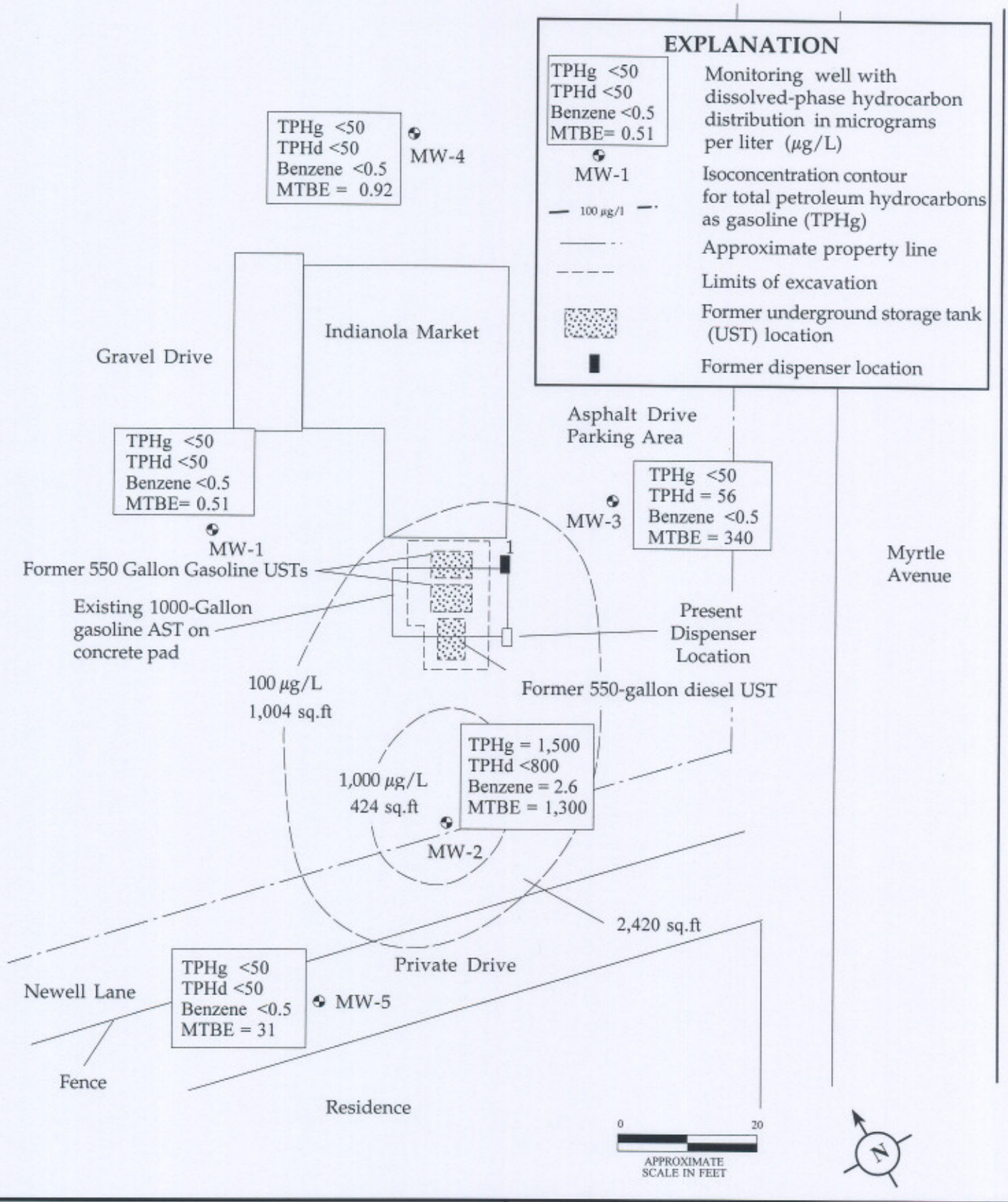


DISSOLVED-PHASE MTBE DISTRIBUTION - 10/11/05

Indianola Market
7769 Myrtle Ave.
Eureka, California

BLUE ROCK ENVIRONMENTAL, INC.

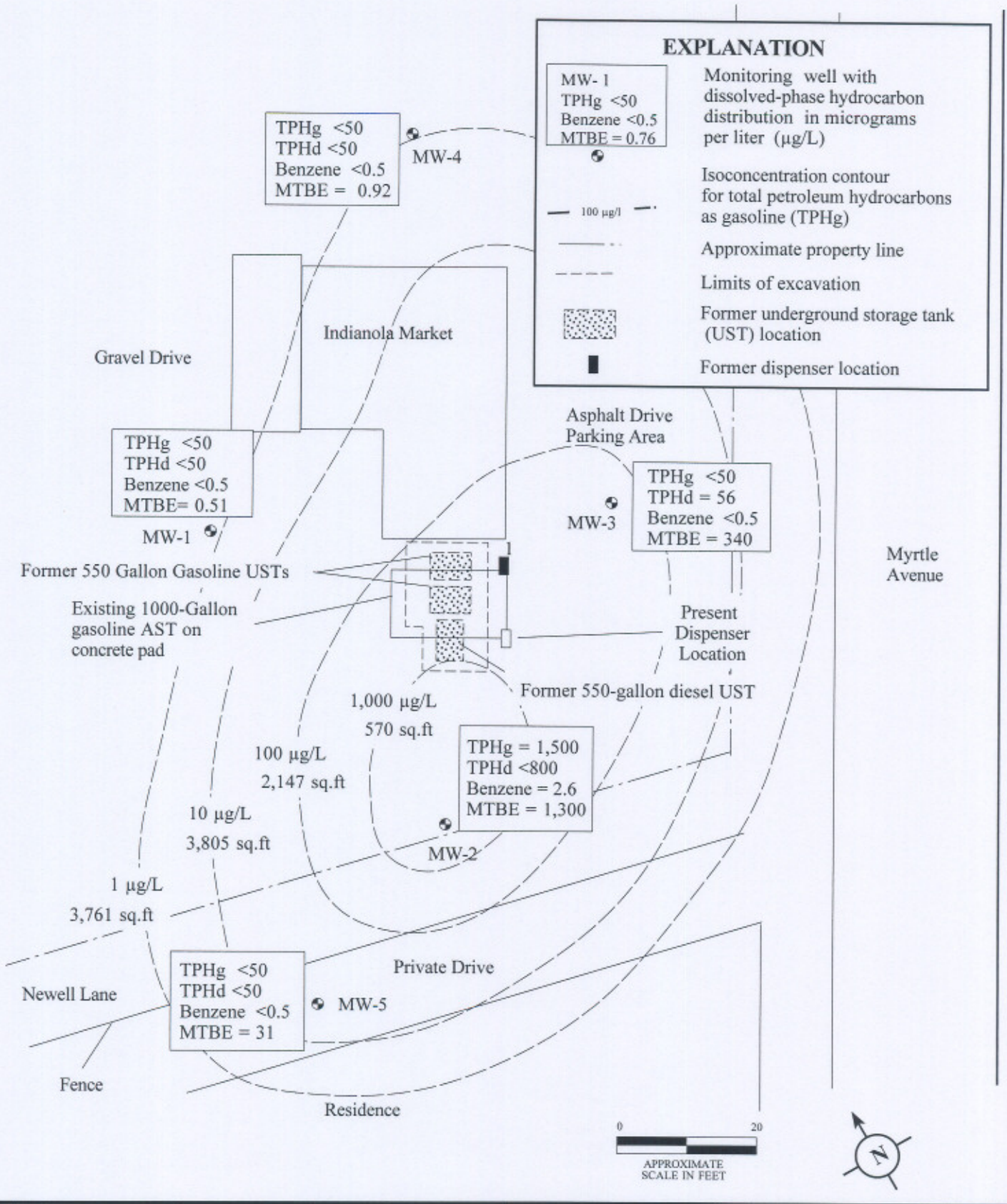
Project No.	Report Date	Figure
NC-18	**12/05**	**5b**



DISSOLVED-PHASE TPHg DISTRIBUTION - 1/13/03
Indianola Market
7769 Myrtle Ave.
Eureka, California

BLUE ROCK ENVIRONMENTAL, INC.

Project No.	Report Date	Figure
NC-18	**12/05**	**5c**



DISSOLVED-PHASE TPHg DISTRIBUTION - 1/13/03
Indianola Market
7769 Myrtle Ave.
Eureka, California

BLUE ROCK ENVIRONMENTAL, INC.

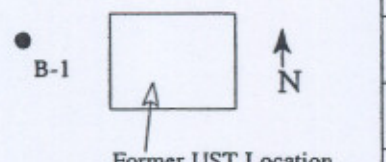
Project No.	Report Date	Figure
NC-18	**12/05**	**5d**

APPENDIX A

Project No BE001C

Sheet 1 of 5

CGI - FIELD EXPLORATORY SOIL BORING LOG

FIELD LOCATION OF BORING: 	CLIENT/LOCATION: Alto / Indianola	PLANNED USE: Soil / GW Samp	BORING DEPTH: 12'	BORING/WELL NO.: B-1
	DRILLING CONTRACTOR: Fisch Environmental	DRILL RIG TYPE: Geoprobe	WELL DEPTH: N/A	BORING DIAMETER: 3'
	DRILL RIG OPERATOR: Rick	WELL MATERIAL: N/A	FILTER PACK: N/A	SCREEN SLOT SIZE: N/A
	WELL SEAL: Boring backfilled w/ hydrated bentonite			

SAMPLING METHOD: Direct Push

MONITORING INSTRUMENT: PID

FIRST ENCOUNTERED WATER DEPTH: 11'

STATIC WATER DEPTH - DATE: 7.07' 10/02/01

DRILLING/WELL CONSTRUCTION: START 2:00 FINISH 3:00

LOGGED BY: A. Locicero 10/2/01

APPROVED BY:

WELL CONSTRUCTION DETAIL	SAMPLING: BLOWS/6" INTERVAL	SAMPLING: DRIVE	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL	WATER LEVEL	DEPTH (FEET)	OVM READING (PPM)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	GRAPHIC LOG
				x		5	0.1				
				x	▼	10	0.5				

Gravel / Subgrade Fill (GW)

Brown Clayey Silt (MH), Moderate Plasticity
Moist, No Odor

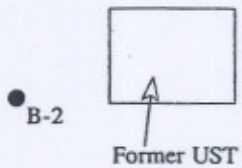
Sandy Clay (SC), Moderate Plasticity
Wet, No Odor

CGI - FIELD EXPLORATORY SOIL BORING LOG

Project No. B0001C

Sheet 2 of 5

FIELD LOCATION OF BORING:



CLIENT/LOCATION:	PLANNED USE:	BORING DEPTH:	BORING/WELL NO.:
Alto / Indianola	Soil / GW Samp	12'	B-2
DRILLING CONTRACTOR:	**DRILL RIG TYPE:**	**WELL DEPTH:**	**BORING DIAMETER:**
Fisch Environmental	Geoprobe	N/A	3'
DRILL RIG OPERATOR:	**WELL MATERIAL:**	**FILTER PACK:**	**SCREEN SLOT SIZE:**
Rick	N/A	N/A	N/A

WELL SEAL: Boring backfilled w/ hydrated bentonite

SAMPLING METHOD: Direct Push

MONITORING INSTRUMENT: PID

FIRST ENCOUNTERED WATER DEPTH: 8.5'

STATIC WATER DEPTH - DATE: 7.01' 10/02/01

DEPTH (FEET)	OVM READING (PPM)	SAMPLING: BLOWS/6" INTERVAL	SAMPLING: DRIVE	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL	WATER LEVEL	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	GRAPHIC LOG	WELL CONSTRUCTION DETAIL
1											
2											
3											
4	3.0				X						
5											
6											
7											
8	0.7				X	▼					
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											

Gravel / Subgrade Fill (GW)

Brown Clayey Silt (MH), Moderate Plasticity
Moist, No Odor

Sandy Clay (SC), Moderate Plasticity
Wet, No Odor

DRILLING/WELL CONSTRUCTION: START 3:00 FINISH 4:00

LOGGED BY: A. Locicero 10/2/01

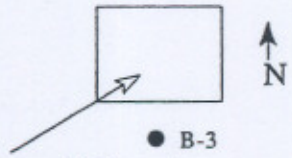
APPROVED BY:

CGI - FIELD EXPLORATORY SOIL BORING LOG

Project No BE001C

Sheet 3 of 5

FIELD LOCATION OF BORING:



CLIENT/LOCATION:	PLANNED USE:	BORING DEPTH:	BORING/WELL NO.:
Alto / Indianola	Soil / GW Samp	12'	B-3
DRILLING CONTRACTOR:	**DRILL RIG TYPE:**	**WELL DEPTH:**	**BORING DIAMETER:**
Fisch Environmental	Geoprobe	N/A	3'
DRILL RIG OPERATOR:	**WELL MATERIAL:**	**FILTER PACK:**	**SCREEN SLOT SIZE:**
Rick	N/A	N/A	N/A

WELL SEAL: Boring backfilled w/ hydrated bentonite

SAMPLING METHOD: Direct Push

MONITORING INSTRUMENT: PID

FIRST ENCOUNTERED WATER DEPTH: 6'

STATIC WATER DEPTH - DATE: 5.94' 10/02/01

WELL CONSTRUCTION DETAIL	SAMPLING: BLOWS/6" INTERVAL	SAMPLING: DRIVE	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL	WATER LEVEL	DEPTH (FEET)	OVM READING (PPM)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	GRAPHIC LOG
				X	▼	4	2.7				
				X		7	0.8				

Gravel / Subgrade Fill (GW)

Gray Clayey Silt (MH), Moderate Plasticity
Moist, HC Odor, stained appearance

Brown Clayey Silt (MH), Wet, No Odor

DRILLING/WELL CONSTRUCTION: START 10:00 FINISH 11:00

LOGGED BY: A. Locicero 10/2/01

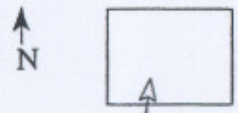
APPROVED BY:

Project No. BE001C

Sheet 4 of 5

CGI - FIELD EXPLORATORY SOIL BORING LOG

FIELD LOCATION OF BORING:



CLIENT/LOCATION:	PLANNED USE:	BORING DEPTH:	BORING/WELL NO.:
Alto / Indianola	Soil / GW Samp	12'	B-4
DRILLING CONTRACTOR:	**DRILL RIG TYPE:**	**WELL DEPTH:**	**BORING DIAMETER:**
Fisch Environmental	Geoprobe	N/A	3'
DRILL RIG OPERATOR:	**WELL MATERIAL:**	**FILTER PACK:**	**SCREEN SLOT SIZE:**
Rick	N/A	N/A	N/A

WELL SEAL: Boring backfilled w/ hydrated bentonite

SAMPLING METHOD: Direct Push

MONITORING INSTRUMENT: PID

FIRST ENCOUNTERED WATER DEPTH: 11'

STATIC WATER DEPTH - DATE: 5.04' 10/02/01

WELL CONSTRUCTION DETAIL	SAMPLING: BLOWS/6" INTERVAL	SAMPLING: DRIVE	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL	WATER LEVEL	DEPTH (FEET)	OVM READING (PPM)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	GRAPHIC LOG
				X		4	0.9				
				X		7	2.7				
					▼	11					

Gravel / Subgrade Fill (GW)

Dark Brown Clayey Silt Clay (MH), Moderate Plasticity, Moist, HC Odor

Gray Clayey Silt(MH), Moderate Plasticity Moist, Slight HC Odor

Silty sand (ML), moist, moderate plasticity, No Odor

LOGGED BY: A. Locicero 10/2/01 DRILLING/WELL CONSTRUCTION: START 11:00 FINISH 12:00

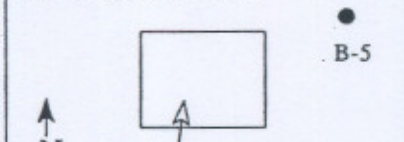
APPROVED BY:

Project No BE001C

CGI - FIELD EXPLORATORY SOIL BORING LOG

Sheet _5__ of __5_

FIELD LOCATION OF BORING:



CLIENT/LOCATION:	PLANNED USE:	BORING DEPTH:	BORING/WELL NO.:
Alto / Indianola	Soil / GW Samp	12'	B-5
DRILLING CONTRACTOR:	**DRILL RIG TYPE:**	**WELL DEPTH:**	**BORING DIAMETER:**
Fisch Environmental	Geoprobe		3'
DRILL RIG OPERATOR:	**WELL MATERIAL:**	**FILTER PACK:**	**SCREEN SLOT SIZE:**
Rick	N/A	N/A	N/A

WELL SEAL: Boring backfilled w/ hydrated bentonite

SAMPLING METHOD: Direct Push

MONITORING INSTRUMENT: PID

FIRST ENCOUNTERED WATER DEPTH: 7.5'

STATIC WATER DEPTH - DATE: 4.71' 10/02/01

WELL CONSTRUCTION DETAIL	SAMPLING: BLOWS/6" INTERVAL	SAMPLING: DRIVE	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL	WATER LEVEL	DEPTH (FEET)	OVM READING (PPM)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	GRAPHIC LOG
				x		4	0.6				
				x	▼	7	0.0				

Gravel / Subgrade Fill (GW)

Brown Clayey Silt (MH), Moderate Plasticity
Moist, No Odor

DRILLING/WELL CONSTRUCTION: START 12:00 FINISH 1:00

LOGGED BY: A. Locicero 10/2/01

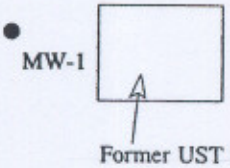
APPROVED BY:

CGI - FIELD EXPLORATORY SOIL BORING LOG

Project No. BE001C

Sheet 1 of 3

FIELD LOCATION OF BORING:



CLIENT/LOCATION:	PLANNED USE:	BORING DEPTH:	BORING/WELL NO.:
Alto / Indianola	monitoring	20'	MW-1
DRILLING CONTRACTOR:	**DRILL RIG TYPE:**	**WELL DEPTH:**	**BORING DIAMETER:**
Mitchell Drilling	hollow stem	20'	8"
DRILL RIG OPERATOR:	**WELL MATERIAL:**	**FILTER PACK:**	**SCREEN SLOT SIZE:**
Ed Mitchell	pvc	2/12	0.20

WELL SEAL: cement / bentonite

SAMPLING METHOD: split spoon

MONITORING INSTRUMENT: PID

FIRST ENCOUNTERED WATER DEPTH: 12.5'

STATIC WATER DEPTH - DATE:

DEPTH (FEET)	SAMPLING: BLOWS/6" INTERVAL	DRIVE	RECOVERY	ANALYTICAL	WATER LEVEL	OVM READING (PPM)	ESTIMATED PERCENT: GRAVEL	SAND	FINES	GRAPHIC LOG
1										
2										
3										
4										
5	4	6	6			247				
	4	6	6	X						
	5	6	6							
6										
7										
8										
9										
10	6	6	6			165				
	8	6	6	X						
	16	6	6							
11										
12					▼					
13										
14										
15	13	6	6			162				
	16	6	6	X						
	20	6	6							
16										
17										
18										
19										
20	15	6	6			103				
	50/5	6	6	X						
21										
22										
23										
24										
25										
26										
27										
28										
29										
30										

Gravel / Subgrade Fill (GW)

Brown Clayey Silt (MH), Moderate Plasticity
Moist, No odor

Sandy Clay (SC), Moderate Plasticity
Wet, No Odor

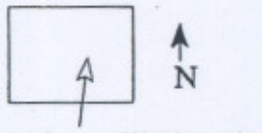
LOGGED BY: A. Locicero 11/7/01 DRILLING/WELL CONSTRUCTION: START 9:00 FINISH 10:30

APPROVED BY:

CGI - FIELD EXPLORATORY SOIL BORING LOG

Project No. BE001C

Sheet 2 of 3

FIELD LOCATION OF BORING:	CLIENT/LOCATION:	PLANNED USE:	BORING DEPTH:	BORING/WELL NO.:
	Alto / Indianola	monitoring	20'	MW-2
	DRILLING CONTRACTOR: Mitchell Drilling	DRILL RIG TYPE: hollow stem	WELL DEPTH: 20'	BORING DIAMETER: 8"
	DRILL RIG OPERATOR: Ed Mitchell	WELL MATERIAL: pvc	FILTER PACK: 2/12	SCREEN SLOT SIZE: 0.20
	WELL SEAL: cement / bentonite			

DRILLING/WELL CONSTRUCTION: START 11:00 FINISH 12:00

LOGGED BY: A. Locicero 11/7/01

APPROVED BY:

SAMPLING METHOD: split spoon

MONITORING INSTRUMENT: PID

FIRST ENCOUNTERED WATER DEPTH: 12'

STATIC WATER DEPTH - DATE:

WELL CONSTRUCTION DETAIL	SAMPLING: BLOWS/6" INTERVAL	SAMPLING: DRIVE	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL	WATER LEVEL	DEPTH (FEET)	OVM READING (FPM)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	GRAPHIC LOG
	3	6	6			5	105				
	6	6	6	X							
	14	6	6								
	6	6	6			10	9.8				
	8	6	6	X							
	15	6	6		▼						
	7	6	6			15	65				
	12	6	6	X							
	10	6	6								
	7	6	6			20	67				
	50/5	6	6	X							

Gravel / Subgrade Fill (GW)

Gray -Green Clayey Silt (MH),
Moderate Plasticity, Moist, HC Odor
Cobbles approx. 1/2"

Brown Clayey Silt (MH),
Moderate Plasticity, Moist, Slight HC Odor
Cobbles <1/2"

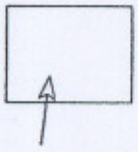
Brown Silty Sand (ML), Low Plasticity
Wet, No Odor

CGI - FIELD EXPLORATORY SOIL BORING LOG

Project No. BE001C

Sheet _3_ of _3_

FIELD LOCATION OF BORING:



CLIENT/LOCATION:	PLANNED USE:	BORING DEPTH:	BORING/WELL NO.:
Alto / Indianola	monitoring	20'	MW-3
DRILLING CONTRACTOR:	**DRILL RIG TYPE:**	**WELL DEPTH:**	**BORING DIAMETER:**
Mitchell Drilling	hollow stem	20'	8"
DRILL RIG OPERATOR:	**WELL MATERIAL:**	**FILTER PACK:**	**SCREEN SLOT SIZE:**
Ed Mitchell	pvc	2/12	0.20

WELL SEAL: cement / bentonite

SAMPLING METHOD: split spoon

MONITORING INSTRUMENT: PID

FIRST ENCOUNTERED WATER DEPTH: 10.0'

STATIC WATER DEPTH - DATE:

DEPTH (FEET)	WELL CONSTRUCTION DETAIL	SAMPLING: BLOWS/6" INTERVAL	SAMPLING: DRIVE	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL	WATER LEVEL	OVM READING (PPM)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	GRAPHIC LOG
1											
2											
3											
4											
5		5 6 6					45				
		5 6 6			X						
		7 6 6									
6											
7											
8											
9											
10		5 6 6				▼	63				
		9 6 6			X						
11		14 6 6									
12											
13											
14											
15		16 6 6					128				
		18 6 6			X						
16		28 6 6									
17											
18											
19		7 6 6									
20		50/5 6 6			X		90				
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											

Gravel / Subgrade Fill (GW)

Gray -Green Clayey Silt (MH),
Moderate Plasticity, Moist, HC Odor

Brown Clayey Silt w/ Sand (MH),
Moderate Plasticity, Moist, Slight HC Odor

Gray Silty Sand (ML), Low Plasticity
Wet, No Odor

LOGGED BY: A. Locicero 11/7/01 DRILLING/WELL CONSTRUCTION: START 11:00 FINISH 12:00

APPROVED BY:

CGI - FIELD EXPLORATORY SOIL BORING LOG

Project No. BE001C

Sheet 3 of 3

FIELD LOCATION OF BORING:	CLIENT/LOCATION:	PLANNED USE:	BORING DEPTH:	BORING/WELL NO.:
● MW-4, N, Market, Former UST Location	Alto / Indianola	monitoring	20'	MW-4
	DRILLING CONTRACTOR: Mitchell Drilling	DRILL RIG TYPE: hollow stem	WELL DEPTH: 20'	BORING DIAMETER: 8"
	DRILL RIG OPERATOR: Ed Mitchell	WELL MATERIAL: pvc	FILTER PACK: 2/12	SCREEN SLOT SIZE: 0.20
	WELL SEAL: cement / bentonite			

SAMPLING METHOD: CA mod. split spoon

MONITORING INSTRUMENT: PID

FIRST ENCOUNTERED WATER DEPTH: 10.0'

STATIC WATER DEPTH - DATE: 4.99' 10/15/02

DEPTH (FEET)	WELL CONSTRUCTION DETAIL	SAMPLING: BLOWS/6" INTERVAL	DRIVE	RECOVERY	ANALYTICAL	WATER LEVEL	OVM READING (PPM)	ESTIMATED PERCENT: GRAVEL	SAND	FINES	GRAPHIC LOG
1											
2											
3											
4											
5		12	6	6		▼	18			95	
		22	6	6	x						
		34	6	6							
6											
7											
8											
9											
10		14	6	6		▽	0.7		70	30	
		32	6	6	x						
		30	6	6							
11											
12											
13											
14											
15		15	6	6			0.3		90		
		22	6	6	x						
		50	6	6							
16											
17											
18											
19		14	6	6							
		26	6	6							
20		30	6	6	x		0.4				
21											
22											
23											
24											
25											
26											
27											
28											
29											
30											

Gravel / Subgrade Fill (GW)

Clayey Silt (MH), dark brown <5% sand moderate to high plasticity, moist, no odor, hard

Clayey Silt w/ fine grain sand (MH), Rust brown moderate to high plasticity, moist, no odor, hard

Silty sand (ML), Rust brown moderate to low plasticity, moist, no odor, very dense

Sand (SW), Gray little or no fines, low plasticity, wet, no odor, very dense

LOGGED BY: M. Richard 10/10/02 DRILLING/WELL CONSTRUCTION: START 11:00 FINISH 12:30

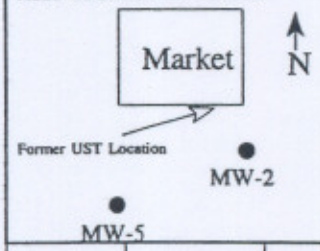
APPROVED BY:

CGI - FIELD EXPLORATORY SOIL BORING LOG

Project No. BE001C

Sheet 3 of 3

FIELD LOCATION OF BORING:



CLIENT/LOCATION:	PLANNED USE:	BORING DEPTH:	BORING/WELL NO.:
Alto / Indianola	monitoring	20'	MW-5
DRILLING CONTRACTOR:	**DRILL RIG TYPE:**	**WELL DEPTH:**	**BORING DIAMETER:**
Mitchell Drilling	hollow stem	20'	8"
DRILL RIG OPERATOR:	**WELL MATERIAL:**	**FILTER PACK:**	**SCREEN SLOT SIZE:**
Ed Mitchell	pvc	2/12	0.20

WELL SEAL: cement / bentonite

SAMPLING METHOD: CA mod. split spoon

MONITORING INSTRUMENT: PID

FIRST ENCOUNTERED WATER DEPTH: 10.0'

STATIC WATER DEPTH - DATE: 7.11' 10/15/02

DEPTH (FEET)	WELL CONSTRUCTION DETAIL	BLOWS/6" INTERVAL	DRIVE	RECOVERY	ANALYTICAL	WATER LEVEL	OVM READING (PPM)	ESTIMATED PERCENT GRAVEL	SAND	FINES	GRAPHIC LOG
5		6	6	6			0.0			95	
6		6	6	6	X						
30		6	6	6							
9		6	6	6			0.0			95	
14		6	6	6	X						
20		6	6	6							
10		6	6	6							
21		6	6	6	X		20		60	40	
26		6	6	6							
20		6	6	6							
15		6	6	6							
16		6	6	6	X		0.6				

Gravel / Subgrade Fill (GW)

clayey silt (MH), rust brown, <5% sand moderate to high plasticity, Moist, no odor, very stiff

clayey silt (MH), rust brown, <5% sand moderate plasticity, moist, no odor, very stiff

Silty sand (ML), gray brown, low Plasticity Wet, no odor, dense

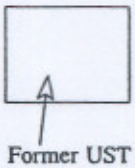
LOGGED BY: M. Richard 10/10/02 DRILLING/WELL CONSTRUCTION: START 8:00 FINISH 9:30

APPROVED BY:

CGI - FIELD EXPLORATORY SOIL BORING LOG

Project No. BE001C
Sheet 1 of 4

FIELD LOCATION OF BORING:



CLIENT/LOCATION:	PLANNED USE:	BORING DEPTH:	BORING/WELL NO.:
Alto / Indianola	soil investigation	5'	B-6
DRILLING CONTRACTOR:	**DRILL RIG TYPE:**	**WELL DEPTH:**	**BORING DIAMETER:**
Mitchell Drilling	hollow stem	N/A	8"
DRILL RIG OPERATOR:	**WELL MATERIAL:**	**FILTER PACK:**	**SCREEN SLOT SIZE:**
Ed Mitchell	N/A	N/A	N/A

WELL SEAL: cement / bentonite

SAMPLING METHOD: split spoon
MONITORING INSTRUMENT: PID
FIRST ENCOUNTERED WATER DEPTH: No water encountered
STATIC WATER DEPTH - DATE:

WELL CONSTRUCTION DETAIL	SAMPLING: BLOWS/6" INTERVAL	SAMPLING: DRIVE	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL	WATER LEVEL	DEPTH (FEET)	OVM READING (PPM)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	GRAPHIC LOG
	P	6	6			1					
	P	6	6	x		2	165				
	P	6	6			3					
	P	6	6			4	247				
	P	6	6	x		5					
	P	6	6			6					
						7					
						8					
						9					
						10					
						11					
						12					
						13					
						14					
						15					
						16					
						17					
						18					
						19					
						20					
						21					
						22					
						23					
						24					
						25					
						26					
						27					
						28					
						29					
						30					

Gravel / Subgrade Fill (GW)

Gray clayey silt (MH), Moderate Plasticity
Moist, HC Odor

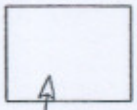
START 9:00 FINISH 10:15
LOGGED BY: A. Locicero 6/11/03 DRILLING/WELL CONSTRUCTION:
APPROVED BY:

CGI - FIELD EXPLORATORY SOIL BORING LOG

Project No. BE001C
Sheet 2 of 4

CLIENT/LOCATION: Alto / Indianola	PLANNED USE: soil investigation	BORING DEPTH: 10'	BORING/WELL NO.: B-7
DRILLING CONTRACTOR: Mitchell Drilling	DRILL RIG TYPE: hollow stem	WELL DEPTH: N/A	BORING DIAMETER: 8"
DRILL RIG OPERATOR: Ed Mitchell	WELL MATERIAL: N/A	FILTER PACK: N/A	SCREEN SLOT SIZE: N/A
WELL SEAL: cement / bentonite			

FIELD LOCATION OF BORING:



SAMPLING METHOD: split spoon
MONITORING INSTRUMENT: PID
FIRST ENCOUNTERED WATER DEPTH: approx. 9.5' bgs
STATIC WATER DEPTH - DATE:

WELL CONSTRUCTION DETAIL	SAMPLING: BLOWS/6" INTERVAL	SAMPLING: DRIVE	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL	WATER LEVEL	DEPTH (FEET)	OVM READING (PPM)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	GRAPHIC LOG
	P	6	6	X		4					
	P	6	6			5					
	P	6	6								
	P	6	6			7					
	P	6	6	X		8					
	P	6	6								
	P	6	6		▼	9					
	P	6	6	X		10					
	P	6	6								

Gravel / Subgrade Fill (GW)

Gray clayey silt (MH), Moderate Plasticity
Moist, old gasoline odor

Gray silty sand (ML), Moderate Plasticity
Moist, old gasoline odor

Brown clayey silt (MH), Moderate Plasticity
Moist, slight odor

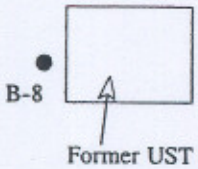
LOGGED BY: A. Locicero 6/11/03 DRILLING/WELL CONSTRUCTION: START 10:30 FINISH 11:30

APPROVED BY:

CGI - FIELD EXPLORATORY SOIL BORING LOG

Project No. BE001C
Sheet 3 of 4

FIELD LOCATION OF BORING:



CLIENT/LOCATION:	PLANNED USE:	BORING DEPTH:	BORING/WELL NO.:
Alto / Indianola	soil investigation	6'	B-8
DRILLING CONTRACTOR:	DRILL RIG TYPE:	WELL DEPTH:	BORING DIAMETER:
Mitchell Drilling	hollow stem	N/A	8"
DRILL RIG OPERATOR:	WELL MATERIAL:	FILTER PACK:	SCREEN SLOT SIZE:
Ed Mitchell	N/A	N/A	N/A
WELL SEAL: cement / bentonite			

SAMPLING METHOD: split spoon
MONITORING INSTRUMENT: PID
FIRST ENCOUNTERED WATER DEPTH: No water encountered
STATIC WATER DEPTH - DATE:

WELL CONSTRUCTION DETAIL	SAMPLING: BLOWS/6" INTERVAL	SAMPLING: DRIVE	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL	WATER LEVEL	DEPTH (FEET)	OVM READING (PPM)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	GRAPHIC LOG
	P	6	6			1					
	P	6	6	X		2					
	P	6	6			3					
	P	6	6			4					
	P	6	6	X		5					
	P	6	6			6					
	P	6	6			7					
	P	6	6	X		8					
	P	6	6			9					
						10					
						11					
						12					
						13					
						14					
						15					
						16					
						17					
						18					
						19					
						20					
						21					
						22					
						23					
						24					
						25					
						26					
						27					
						28					
						29					
						30					

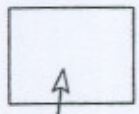
Gravel / Subgrade Fill (GW)

Gray clayey silt (MH), Moderate Plasticity
Moist, Slight HC Odor

DRILLING/WELL CONSTRUCTION: START 12:00 FINISH 13:00
LOGGED BY: A. Locicero 6/11/03
APPROVED BY:

CGI - FIELD EXPLORATORY SOIL BORING LOG

Project No. BE001C
Sheet 4 of 4

FIELD LOCATION OF BORING: 	CLIENT/LOCATION: Alto / Indianola	PLANNED USE: soil investigation	BORING DEPTH: 10'	BORING/WELL NO.: B-9
	DRILLING CONTRACTOR: Mitchell Drilling	DRILL RIG TYPE: hollow stem	WELL DEPTH: N/A	BORING DIAMETER: 8"
	DRILL RIG OPERATOR: Ed Mitchell	WELL MATERIAL: N/A	FILTER PACK: N/A	SCREEN SLOT SIZE: N/A
	WELL SEAL: cement / bentonite			

LOGGED BY: A. Lociciero 6/11/03 DRILLING/WELL CONSTRUCTION: START 13:00 FINISH 14:00

APPROVED BY:

SAMPLING METHOD: split spoon
MONITORING INSTRUMENT: PID
FIRST ENCOUNTERED WATER DEPTH: approx. 9.5' bgs
STATIC WATER DEPTH - DATE:

WELL CONSTRUCTION DETAIL	SAMPLING: BLOWS/6" INTERVAL	SAMPLING: DRIVE	SAMPLING: RECOVERY	SAMPLING: ANALYTICAL	WATER LEVEL	DEPTH (FEET)	OVM READING (PPM)	ESTIMATED PERCENT: GRAVEL	ESTIMATED PERCENT: SAND	ESTIMATED PERCENT: FINES	GRAPHIC LOG
	P	6	6		▼	1					
	P	6	6	x		2					
	P	6	6			3					
						4					
						5					
						6					
						7					
						8					
						9					
						10					
						11					
						12					
						13					
						14					
						15					
						16					
						17					
						18					
						19					
						20					
						21					
						22					
						23					
						24					
						25					
						26					
						27					
						28					
						29					
						30					

Gravel / Subgrade Fill (GW)

Gray clayey silt (MH), Moderate Plasticity
Moist, no odor

Brown silty sand (ML), Moderate Plasticity
Moist, no odor

APPENDIX B

Calculation of Residual Sorbed-Phase TPHg and TPHd Contaminant Mass
Indianola Market, Eureka, CA

Residual Sorbed-Phase TPHg (Area 1)

Mean TPHg conc. (mg/kg)	A (ft2)	h (ft)	V (ft3)	p (lbs/ft3)	TPHg mass (lb)
723.0	780	10	7,800.00	100	563.94
			Total TPHg (gals)		92.45

Residual Sorbed-Phase TPHd (Area 1)

Mean TPHd conc. (mg/kg)	A (ft2)	h (ft)	V (ft3)	p (lbs/ft3)	TPHd mass (lb)
215.0	780	10	7,800.00	100	167.70
			Total TPHd (gals)		27.49

Sorbed-Phase TPHg Removed During Overexcavaion (Area 2)

Mean TPHg conc. (mg/kg)	A (ft2)	h (ft)	V (ft3)	p (lbs/ft3)	TPHg mass (lb)
723.0	211	10	2,110.00	100	152.55
			Total TPHg (gals)		25.01

Sorbed-Phase TPHd Removed During Overexcavaion (Area 2)

Mean TPHd conc. (mg/kg)	A (ft2)	h (ft)	V (ft3)	p (lbs/ft3)	TPHd mass (lb)
215.0	211	10	2,110.00	100	45.37
			Total TPHd (gals)		7.44

A = Area
h = thickness
V = volume = A * h
p = soil density (assume 100 lbs/ft3)
TPHg mass = V (ft3) * p (lbs/ft3) * Mean TPHg conc.
The square footage area for the calculation of estimated residual sorbed-phase TPHg and TPHd excludes the previously excavated area of the former USTs

Calculation of Residual Dissolved-Phase Contaminant Mass January 2003 and October 2005

Indianola Market

Project No. NC-18

Residual TPHg January 2003

Residual TPHg (zone 1) TPHg concentrations >1,000 µg/L

TPHg mean (mg/L)	A (ft^2)	h (ft)	n	V (ft^3)	TPHg mass (ft^3-mg/L)	TPHg mass (lb)
1.400	424	20	0.35	2,968	4,155	0.259

Residual TPHg (zone 1) TPHg concentrations <1,000 µg/L and >100 µg/L

TPHg mean (mg/L)	A (ft^2)	h (ft)	n	V (ft^3)	TPHg mass (ft^3-mg/L)	TPHg mass (lb)
0.320	1,004	20	0.35	7,028	2,249	0.140

Total TPHg Mass (lb)	**0.4**
Total TPHg Vol. (gal.)	**0.07**

Residual MTBE January 2003

Residual MTBE (zone 1) MTBE concentrations <10,000 and >1,000 µg/L

MTBE mean (mg/L)	A (ft^2)	h (ft)	n	V (ft^3)	MTBE mass (ft^3-mg/L)	MTBE mass (lb)
1.900	570	20	0.35	3,990	7,581.0	0.47216

Residual MTBE (zone 2) MTBE concentrations <1,000 µg/L and >100 µg/L.

MTBE mean (mg/L)	A (ft^2)	h (ft)	n	V (ft^3)	MTBE mass (ft^3-mg/L)	MTBE mass (lb)
0.320	2,147	20	0.35	15,029	4,809.3	0.29953

Residual MTBE (zone 3) MTBE concentrations <100 µg/L and >10 µg/L

MTBE mean (mg/L)	A (ft^2)	h (ft)	n	V (ft^3)	MTBE mass (ft^3-mg/L)	MTBE mass (lb)
0.0320	3,805	20	0.35	26,635	852.3	0.05308

Residual MTBE (zone 4) MTBE concentrations <10 µg/L and >1µg/L

MTBE mean (mg/L)	A (ft^2)	h (ft)	n	V (ft^3)	MTBE mass (ft^3-mg/L)	MTBE mass (lb)
0.0032	3,761	20	0.35	26,327	84.2	0.00525

Total MTBE Mass (lb)	**0.8**
Total MTBE Vol. (gal.)	**0.14**

Calculation of Residual Dissolved-Phase Contaminant Mass January 2003 and October 2005

Indianola Market

Project No. NC-18

Residual TPHg October 2005

Residual TPHg (zone 1) TPHg concentrations <1,000 µg/L and >100 µg/L

TPHg mean (mg/L)	A (ft^2)	h (ft)	n	V (ft^3)	TPHg mass (ft^3-mg/L)	TPHg mass (lb)
0.330	737	20	0.35	5,159	1,702	0.106

Total TPHg Mass (lb)	**0.11**
Total TPHg Vol. (gal.)	**0.02**

Residual MTBE October 2005

Residual MTBE (zone 1) MTBE concentrations <1,000 µg/L and >100 µg/L.

MTBE mean (mg/L)	A (ft^2)	h (ft)	n	V (ft^3)	MTBE mass (ft^3-mg/L)	MTBE mass (lb)
0.370	489	20	0.35	3,423	1,266.5	0.07888

Residual MTBE (zone 2) MTBE concentrations <100 µg/L and >10 µg/L

MTBE mean (mg/L)	A (ft^2)	h (ft)	n	V (ft^3)	MTBE mass (ft^3-mg/L)	MTBE mass (lb)
0.0320	2,307	20	0.35	16,149	516.8	0.03219

Residual MTBE (zone 3) MTBE concentrations <10 µg/L and >1µg/L

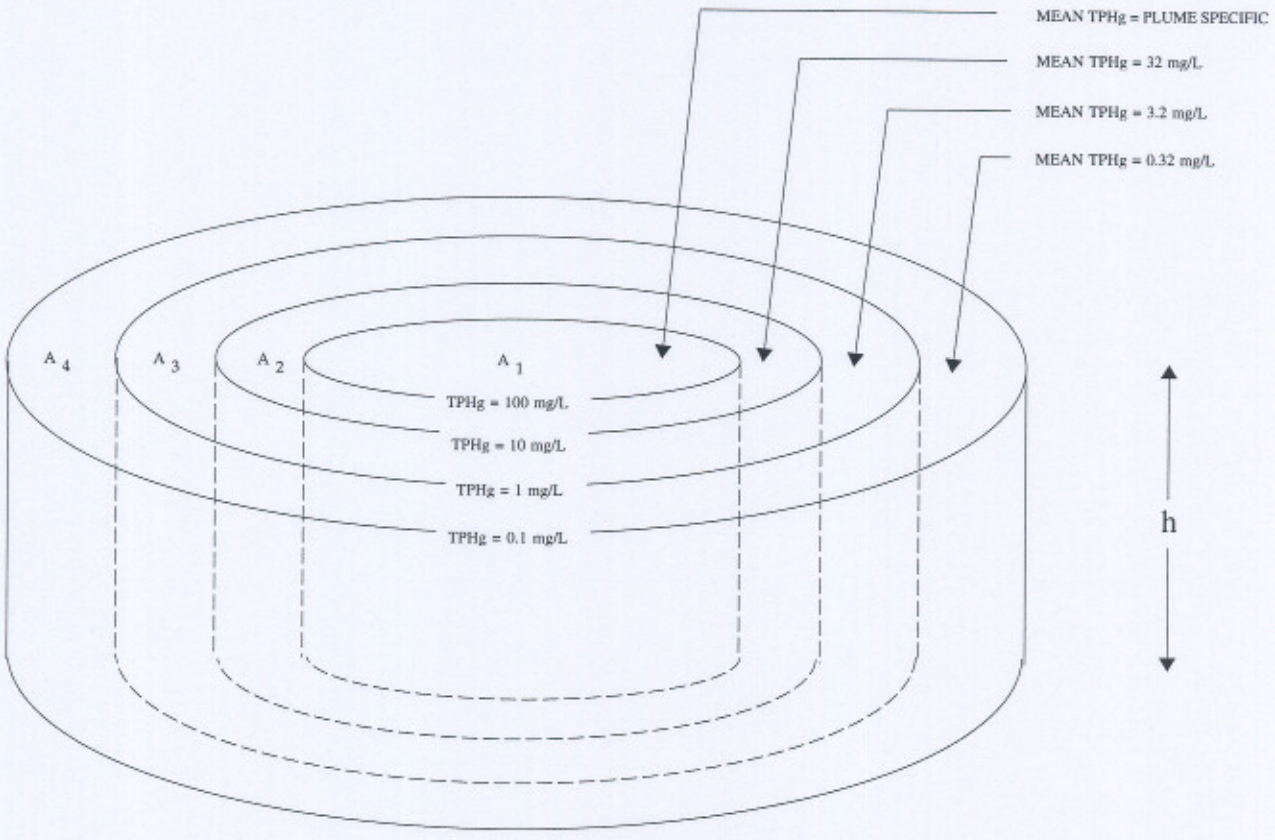
MTBE mean (mg/L)	A (ft^2)	h (ft)	n	V (ft^3)	MTBE mass (ft^3-mg/L)	MTBE mass (lb)
0.0032	4,814	20	0.35	33,698	107.8	0.00672

Total MTBE Mass (lb)	**0.12**
Total MTBE Vol. (gal.)	**0.02**

A = Area
h = thickness
V = volume = A * h
n = soil porosity (assume 35%)
TPHg mass = V (ft3) * Mean TPH conc. (unitless)
MTBE mass = V (ft3) * Mean TPH conc. (unitless)
lb = pound
mg/L = milligrams per liter

TPHg = Total petroleum hydrocarbons as gasoline
MTBE = Methyl tertiary butyl ethyr
gal. = gallons
ft. = foot

MODEL FOR CALCULATING RESIDUAL DISSOLVED CONTAMINANT MASS (TPHg)



$$\text{TPHg mass } (ft^3\text{-mg/L}) = \sum_{1}^{n} V_X (\text{mean TPHg concentration}_X)$$

Convert TPHg mass to (lbs) = $(ft^3\text{-mg/L})$ (28.31 L/ft^3) (0.000001 kg/mg) (2.2 lbs/kg)

where,

$V_X = A_X (h)\, n$

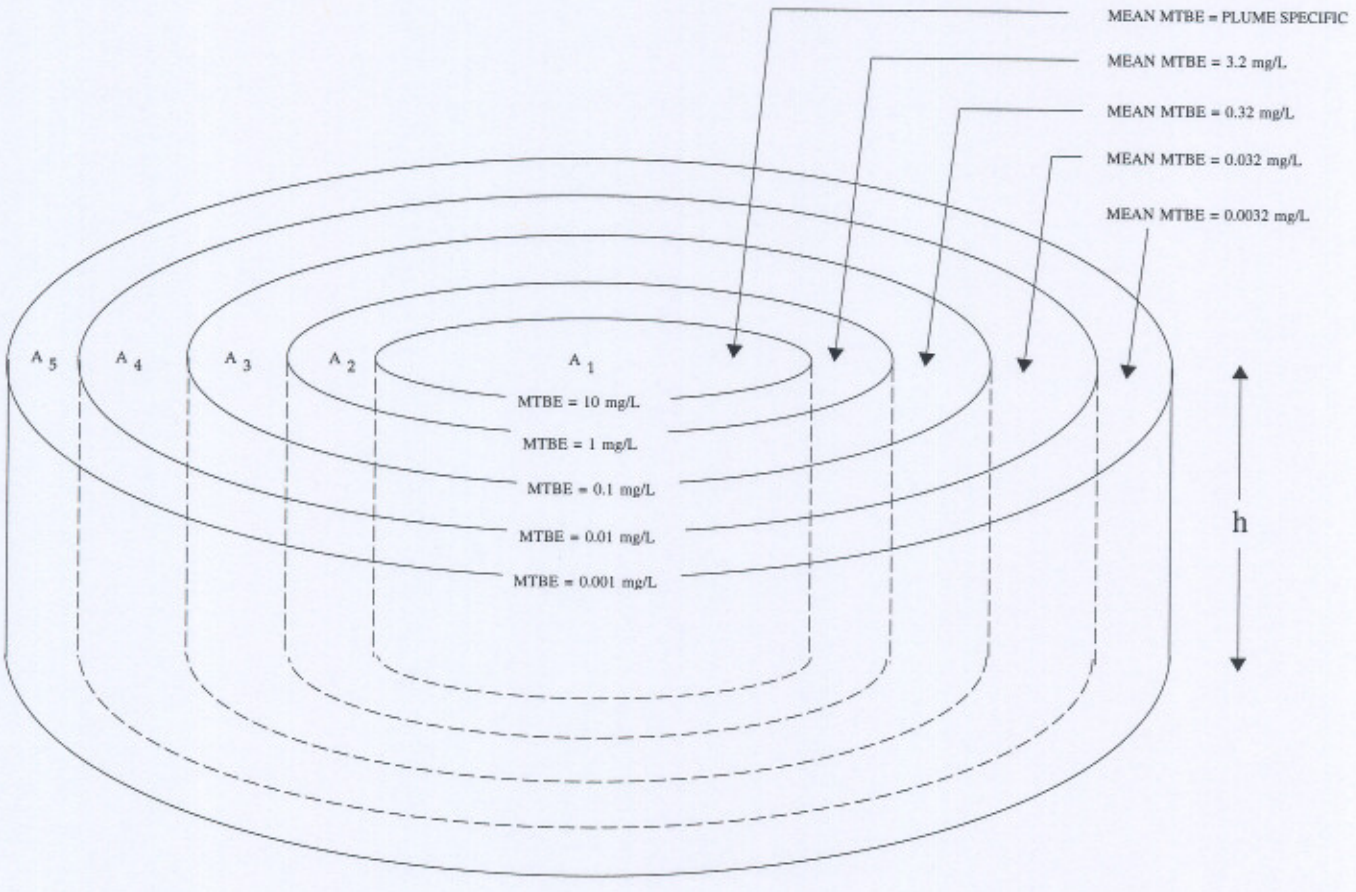
A_X = Area between isoconcentrations measured by planimeter

h = Thickness of dissolved contaminant plume

n = Porosity of saturated zone soil

Model assumes that contaminant concentrations decrease logarithmically from source. Thus, log based formula was used to calculate mean contaminant concentrations.

MODEL FOR CALCULATING RESIDUAL DISSOLVED CONTAMINANT MASS (MTBE)



$$\text{MTBE mass } (ft^3\text{-mg/L}) = \sum_{1}^{n} V_X (\text{mean MTBE concentration}_X)$$

Convert MTBE mass to (lbs) = $(ft^3\text{-mg/L})\ (28.31\ L/ft^3)\ (0.000001\ kg/mg)\ (2.2\ lbs/kg)$

where,

$V_X = A_X (h)\ n$

A_X = Area between isoconcentrations measured by planimeter

h = Thickness of dissolved contaminant plume

n = Porosity of saturated zone soil

Model assumes that contaminant concentrations decrease logarithmically from source. Thus, log based formula was used to calculate mean contaminant concentrations.

APPENDIX C

Chart 1
Indianola Market
7769 Myrtle Avenue
Eureka, California
Project No. NC-18

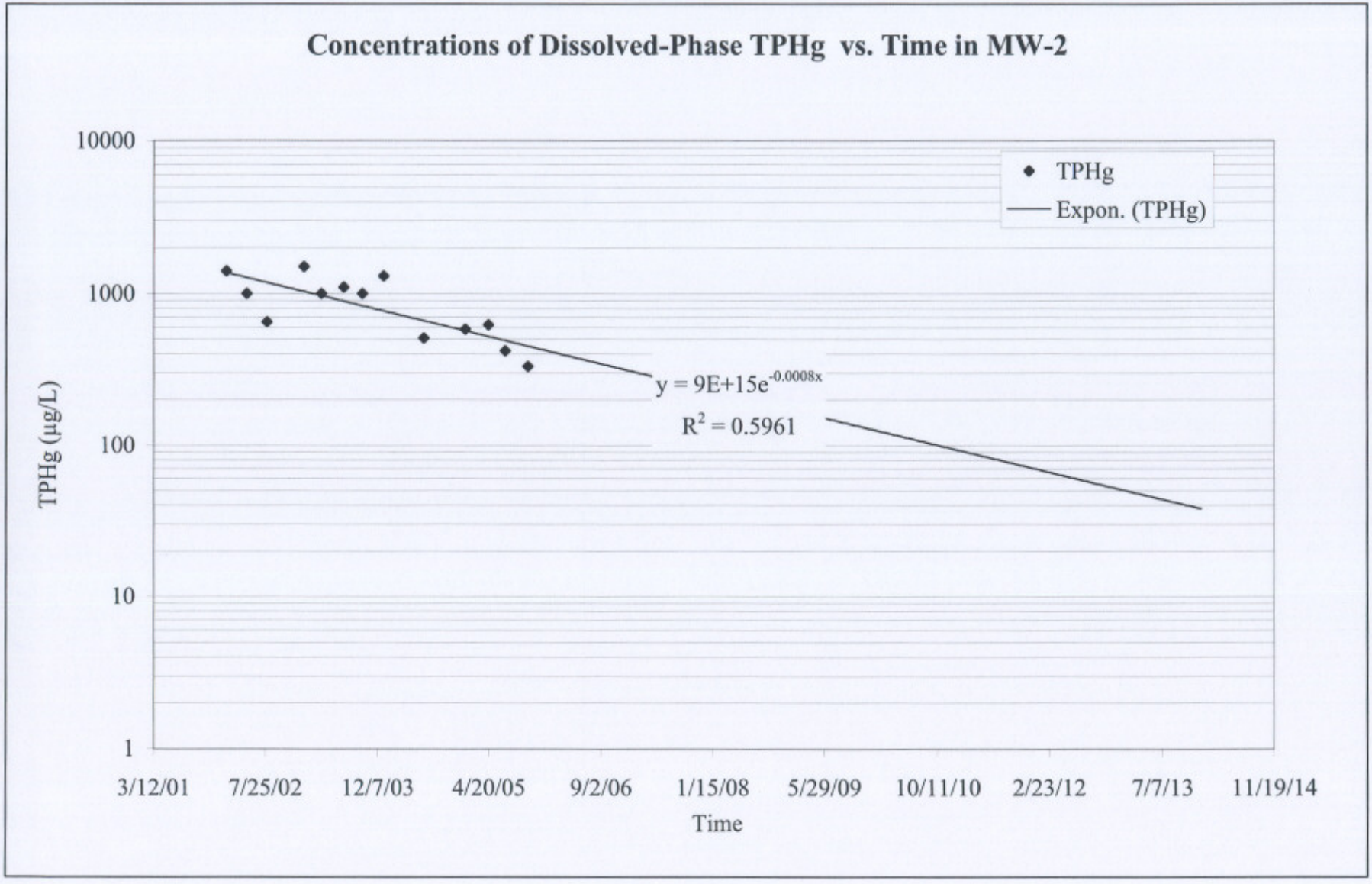


Chart 2
Indianola Market
7769 Myrtle Avenue
Eureka, California
Project No. NC-18

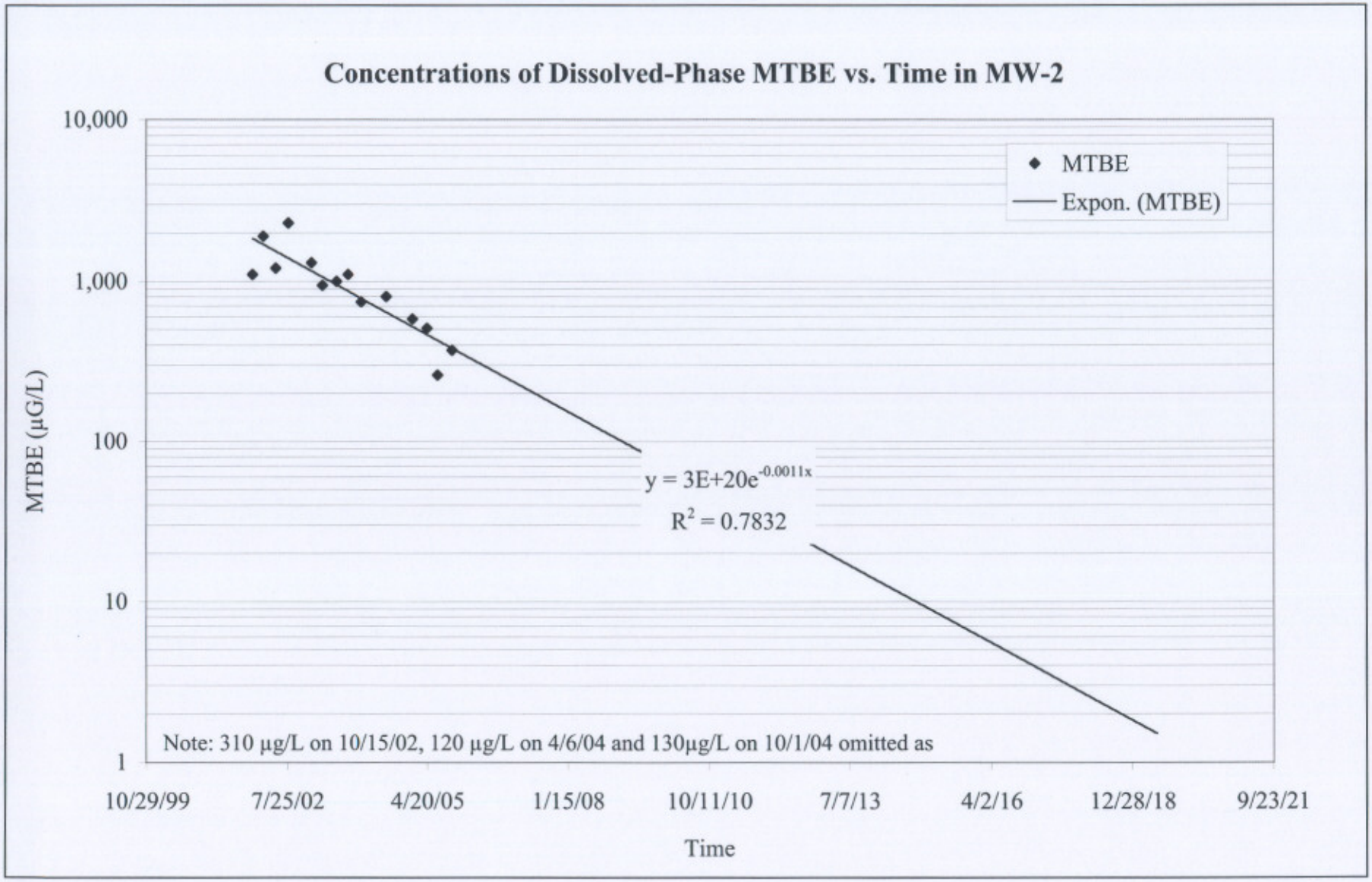


Chart 3
Indianola Market
7769 Myrtle Avenue
Eureka, California
Project No. NC-18